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Addresses.

SECTION ON LARYNGOLOGY AND OTOLOGY.

CHAIRMAN'S ADDRESS.*

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NEW YORK CITY.

With the advance in other branches of medicine in the past few years, otology and laryngology with their allied branches have fully kept pace. The otologist has made himself not only master of the indication pointing toward the involvement of disease in the adjoining sinuses, and in the cranial cavity, but the technics of operative procedure have been fully mastered, so that what was formerly done occasionally by the general surgeon, or more frequently was entirely unrecognized, is now promptly discovered and attended to by him.

In laryngology, intubation of a gradual nature by Schröter's tubes, or the O'Dwyer tube, has taken the place of tracheotomy in acute stenoses, while in the more chronic forms both tracheotomy and intubation may be required. In cases where a preliminary tracheotomy has been performed, the retention of the intubation-tube has been found to be frequently impossible. For such cases the ingenuity of Dr. John Rogers of New York City has come to the rescue with a most excellent and serviceable device. It consists of having a threaded opening made into the tube directly opposite the tracheal opening, and into this opening is screwed a solid hard-rubber tube which remains and absolutely prevents the tube from being coughed out. I have had most gratifying results from its use. The endolaryngeal method of removal of growths still betokens the greatest skill in the laryngologist. The curette has entirely taken the place of the cautery in the treatment of follicular pharyngitis, and the use of gargles for pharyngeal affections is shown to be rarely of avail.

In the treatment of nasal affections the greatest advance has been in the more conservative treatment of that hitherto abused organ. The various synechiæ and subsequent sufferings occasioned by the indiscriminate use of saw and cautery have resulted in their practical disuse. There are many rhinologists whose saws are now accumulating the dust of time and whose galvanocautery tips rarely feel the glow of heat. The "beautiful results of the cautery of the inferior turbinate," as they have been termed, are now produced by other methods, painless, prompt, and free from subsequent discomforts.

"Many a nasal or pharyngeal mucous membrane has been practically ruined by the indiscriminate use of the cautery or knife for the relief of existing disturbances, the sole object apparently being to give space regardless of the destruction of tissue. Had the treatment been directed toward the true cause, the nasal mucosa would have remained intact and after the relief of the congestion the individual would have left a normal secreting mucous membrane." This statement, just quoted, is from a very recent and valuable paper by one of our own members, and coincides exactly with my own experience. Whatever of good there might have been in some carefully selected cases by the use of the cautery was more than counterbalanced by the greater harm that was occasioned by promiscuous applications and in hands unskilled. Even in practiced hands it often happened that parts not intended to be touched were frequently the recipients of the sears of the cautery.

To acknowledge former errors is part of our duty and it is distinctly an advance when safer methods take the place of former crude ones. These are some few of the advances that have been made in our work; to mention all would be to review the whole literature of the past few years, a task that would be onerous to me, and also to you to be compelled to listen.

From time immemorial it has been the custom of physicians to present the results of their brain-work, whether it be in the shape of a new remedy, a new instrument or a new operation, freely to the profession, and without expectation of reward. We have come to accept these offerings quite as a matter of fact, for each of us would do the same. We are often not only indifferent, but we find fault with or try to improve on the original. Our praise, when it is bestowed, is apt to be faint, far too faint. Can we say now that we did all we should have done for our fellow countryman, O'Dwyer? His instruments and his labor will live though he has passed away; some fitting memorial will be erected to commemorate his genius and the triumph of an American physician, but how much grander and nobler it would have been had it been given in his lifetime! Since his too early demise we learn that so great a benefactor to his race, and so competent a physician, always had with him the carking load of care in the struggle for existence, and that he died practically a poor man. Oh, that we might have done better!

Wilhelm Meyer, to whom the world owes so much, had some credit in his lifetime, and a monument to his memory has been erected by the contribution of children from all over the world, and yet, so matter of fact are we that I once heard a physician say that he would not attend a certain meeting at which a paper on adenoids was to be read because someone was sure to mention Wilhelm Meyer and he was "sick of it."

It is not so many years ago that a young medical student at Vienna discovered the effects of cocain. How much human suffering has been saved by its use, what a boon it has been to humanity, you know full well. What commensurate credit in his birthplace or in the land of his adoption has its discoverer received? None that I know of.

At a recent meeting of a large medical society, a

*Presented to the Section on Laryngology and Otology, at the Fiftieth Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.

speaker said that he objected to the naming of a disease or a symptom after its first investigator because it was puzzling to the student of medicine, and hence he objected to such terms as Basedow's disease, Colles' fracture, etc.

These few instances of many that might be cited give ample proof that we are far too lukewarm and too chary in our praise. In the last instance here quoted, without taking the speaker too seriously, I would say that his remarks should be positively condemned. I am not aware that the medical student seeks our solicitude, but if he does, it will be in vain, for we were able to cope with such things, nor is he any better than the student of chemistry, botany or astronomy for instance. A new chemical, a new flower or planet bears the name of its discoverer, why not an instrument or a disease?

Instead of indifference, would it not be better then if we cultivated "that most aristocratic of all virtues," appreciation? Why should we, like the proverbial republic, be ungrateful? If it were known that as a recompense for the obedience to duty that requires a medical man to give freely all that he knows for the benefit of mankind to his professional brethren, he would always receive the grateful and substantial plaudits of his colleagues, what an incentive to thorough work that would be. If, after careful investigation, it was found that his work was of such a nature that he was a benefactor to his race, a credit to his profession and to his country, some commensurate action should be taken in appreciation thereof. There is precedent enough for this.

While every soldier and sailor does his duty, yet we hail the returning hero with loud acclaim. His name is on every tongue, his deeds are sung in poetry and prose, we weave garlands to place upon his brow, we present him with swords and gifts innumerable and nothing is too great for us to do. The most facile pens describe his very action and his heroic deeds. What of the doctor? Are his deeds any the less heroic because unsung? Is his bravery any the less than that of his brother at arms who stands undaunted 'mid shot and shell? The bravery that fights the unseen foe in the most dreaded of all contagious diseases is every bit as great in him as in the other. No one is there to chronicle, and none stands ready to cheer and encourage—only duty, nothing more. Marble is enduring, and much may be placed thereon, but the eye that its words would gladden most sees it not, nor do his pulses thrill at its laudatory words, and no smile of gladness can they evoke. How much better it would be if we showed our gratitude during his lifetime. How amply rewarded such a one would feel to receive the plaudits of his brethren—the most competent of judges. What a gratification it would be if, when we acted thus, we saw how lastingly happy we had made him as we said, "Well done, thou good and faithful servant." With such incentive then, there would be no temptation to cease doing good work, for all would know that there is something still better to be had than is conveyed by the meaningless phrase, "Virtue is its own reward."

GERMANY is about to establish a school for the study of tropical diseases in Hamburg. The Medical Faculty of Berlin, led by Prof. Koch, desired the institution located at Berlin as a department of the Institute for Infectious Diseases. The Government, however, is of the opinion that from the fact that as Hamburg nearly always has patients from the tropics in her hospitals suffering from diseases which are of purely tropical nature, it would be a preferable location.

NEUROLOGY AND PSYCHIATRY.*

PROGRESS THEREIN FOR THE YEAR.

CHAIRMAN'S ADDRESS.

BY FREDERICK PETERSON, M.D.

NEW YORK CITY.

There is but one excuse to offer you for the infliction of an annual address at a Section meeting, and that is that it is a requirement of the By-Laws, from which I quote as follows:

The chairman of each Section shall prepare an address on **the recent advancements in the branches belonging** to his Section, **including suggestions in regard to improvements in methods of work, and present the same to the** Section over **which he presides, on the first day of the annual** meeting. The **reading of such address not to occupy more than** forty minutes.

I shall endeavor to fulfill the obligation thus placed upon me, to your satisfaction, by making the address a very brief one, for I shall be especially careful not to avail myself of the dangerous prerogative of occupying forty minutes should I so choose. Since I am required, in addition to presenting to you the facts of recent progress in our branch of medicine, to include "suggestions in regard to improvements in methods of work," I shall include just one such suggestion, viz., that the annual address referred to be herafter dispensed with or curtailed to remarks not to occupy more than five minutes. I think this a very reasonable suggestion. An annual address which touches upon "recent advancements" in medicine in a general way is proper for the entire body of physicians here gathered together in one great organization, but for the Sections themselves, which are here for the summing up and discussion of the work of their members during the year, an annual address is unnecessary as well as prodigal of precious time. The chairman who would attempt to present to the members of this Section an epitome of the work done in neurology and psychiatry for one year would have a vast and wearying labor to perform, even in collecting the titles only of the many contributors in these subjects, for I am informed that there are some thirty-five hundred articles, pamphlets and books relating to our special line of work now issued yearly. Should the chairman desire to present a review to date of a somewhat new subject, such as, let us say, the cytology of the nerve-cell, he would have to examine four hundred different contributions, books and journal articles by two hundred and eighty authors, in order to write an exhaustive critique of nervous cytology.[1] I have gathered together here, however, in lieu of such an athletic study, and merely to indicate the extraordinary activity of workers in our domain at the present day, a bibliography of neurology and psychiatry and allied subjects for the year 1898 and this early part of the year 1899. I have limited this bibliography to books of over fifty pages. The innumerable pages and articles in medical periodicals are not included. I have the list here, but will spare you the weariness of hearing the titles read. Suffice it to say that there are two hundred and one books under the following headings:

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Anatomy and Physiology of the Nerve-Cell	12
General Neurology	48
Medical Jurisprudence	7
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*Presented to the Section on Neurology and Medical Jurisprudence, at the Fiftieth Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.

[1] Bibliography of the Cytology of the Nerve-Cell. Smith Ely Jelliffe, M.D.

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BIBLIOGRAPHY OF NEUROLOGY AND PSYCHIATRY AND ALLIED BRANCHES. JAN., 1898: MAY 1, 1899.*

*Including works of 50 pages and over. Citations which are not dated appeared in 1898, those of 1899 are so noted.

ANATOMY—HUMAN AND COMPARATIVE.

Boari, E.: Elementi di anatomia, semeiologia e diagnostico del sistema nervosa. Vol. i. Bologna. 1899. Pp. 344.

Edinger, L.: Untersuchungen über die vergleichende Anatomie des Gehirns. 4. Studien über das Zwischenhirns der Reptilien. Frankfort. 1899.

Gaupp, E.: Anatomie des Frosches. 1. Lehre vom Nervensystem. 1899.

Davies, H.: The Cerebellum. London. 1898.

Gegenbauer, C.: Vergleichende Anatomie der Wirbelthiere. Leipzig. Vol. i. Nervensystem.

Kolster, R.: Uber das Ruckenmark einiger Teleostier. Hirschwald. 1899. Pp. 88.

Smith, G. S.: The Brain in the Edentata. London. 1899. Pp. 118.

Flatau, E.: Atlas des menschliche Gehirns und des Faserverlaufes. Berlin. 1898.

Flatau und Jacobsohn: Vergleichende Anatomie des Gehirns der Saugthiere. Karger Berlin. 1899. Pp. 1000. c,

Boyce, R.: A Contribution to the Study of Some of the Decussating Tracts of the Mid and Inter-brain. London. 1899. Pp. 432.

Barker, L. F.: Structure of the Nervous System. Appleton. 1899.

Fusari: Loc. cit. (General Relation of Mind to Body.)

Edinger: Loc. cit. (Nerve-cell.)

ANATOMY—GENERAL.

Jacob, C.: Sistema nervosa. Tr. into Italian, Milan, 1899.

Edinger, L.; Lezioni sulla struttura degli organi nervosi centrali. Italian translation. Milan. 1899. P. 436.

NERVE-CELL. ANATOMY AND PHYSIOLOGY

Bühler, A.: Untersuchungen über den Bau der Nervenzellen. Wurzburg. Pp. 108.

Deschamps, J.: Étude sur les principes et les applications de la physiologie et de la pathologie cellulaire. Paris. Pp. 104.

Deyber, R.: État actual de la question de l'amœboisme nerveux. Paris. Steinheil. Pp, 127.

Goldscheider and Flatau, E.: Normal und pathologische Anatomie der Nervenzellen. Berlin. Fischer. Pp. 144.

Edinger: Sammel Bericht über 1897-1898—Schmidt's Jahrbucher. Ap. 1899. 204, Vol. 262.

BRAIN. MORPHOLOGY, ANATOMY AND PHYSIOLOGY.

Bechterew, von: Die Leitungsbahnen im Gehirn und Ruckenmark. Tr. R. Weinberg, 2 ed. Leipzig. Georgi. Pp. 692.

Hochstetter, F.: Beiträge zur Entwickelungeschichte des Gehirns Nagele.

Manouvier, L.: Le cerveau; Morphologie générale, Anatomie comparé. Richet's Dict. de physiologie.

Mendelssohn, M.: Physiologie du cervelet. Richet's Dict. de physiologie. Paris. Alcan.

Nebelthau, Gehirndurchschnitte zur Erlautering des Faserverlaufs, Wiesbaden. Bergmann. Pp. 81.

Bechterew, von: Bewusstein und Gehirnlocalisation. Deutsch. R. Winberg. Leipzig. Georgi. Pp. 50.

Flechsig, P.: Études sur les cerveau. Tr. L. Levi. Paris. Vigot. Pp. 224.

Farges: Loc. cit. (General Relation of Mind and Body.)

GENERAL NEUROLOGY.

Brissaud, E.: Leçons sur les maladies Nerveuses. Masson, 1899.

Gilles de la Tourette: Leçons de clinique thérapeutique sur les maladies du systeme nerveux. Nourrit et Cie. 1898. Pp. 482.

Raymond, F.: Leçons sur les maladies du systeme nerveux. O. Doin. 1898. Pp. 760.

Gowers, W. R.: A Manual of Diseases of the Nervous System. 3 ed, Vol. i. Diseases of the Nerves and Spinal Cord. Churchill. 1899. Pp. 692.

Wilbrand u. Sänger: Die Neurologie des Auges. Vol. i. Bergmann. Pp. 306.

Edwards, F. G.: Contributions a l'étude de la paralysie spinale aigu de l'adult et de sa nature. Paris. 1898. Pp. 81.

Ballet, V.: De la paralysie bulbo-spinale asthénique ou "Syndrome d'Erb." Paris. Pp. 92.

Maffucci, A.: Patologia della cauda equina e cono terminale. Pisa. 1898. Pp. 92.

Gaupp, O.: Ueber Myoklonie. Tubingen.

Liebmann, A.: Vorlesungen über Sprachstörungen, 1 and 2 heft. Coblentz. 1898. Pp. 104.

Long, E.: Les voies centrales de la sensibilité générale. Steinheil. 1899. Pp. 277.

Wagner, W, and Stolper, P.: Die Verletzungen der Wirbelsaule und des Rückenmarks. Enke. 1899. Pp. 564.

Pollack, B.; Methods of Staining the Nervous System. Trans. Glascow. Pp. 143.

Ramon y Cajal S.: El Sistema nervioso del hombre y de los vertebrados. Madrid. 1897-1898. Pp. 464.

Steiner, S.: Die Functionen des Centralnervensystems und ihre Phylogenese. 3 Abth. Die wirbellosen Thiere. Brunswick. Vieweg. Pp. 154.

Tuke, D. H.: Illustrations of the Influence of the Mind on the Body in Health and Disease. Designed to Elucidate the Action of the Imagination. 2nd edit. London.

Cohn, T.: Leitfaden der Electrodiagnostik und Electrotherapie. Karger. 1899.

Pechoutre, F.: Lesions medullaires dans le tetanos. Paris. Pp. 101.

Brigida, V.: Anatomia patologica del sistema nervosa preceduto da cenni sui processi morbosi e cadavrici compendiata dalle lezisne. Oneglia. 1898. Pp, 284.

Krafft-Ebing, R.: Arbeiten aus dem Gebiet der Psychiatrie und neuropathologie. Barth. Pp. 245.

Baas, K.: Die Augenerscheinungen des Tabes dorsalis und der multiplen Sklerose. Halle. Marhold. Pp. 129.

Collet, F. J.: Les troubles auditive des maladies nerveuses. Paris. Masson. Pp. 184.

Head, H.: Die Sensibilitätsstörungen der Haut bei Visceralerkrankungen. Tr. W. Seiffer. Berlin. Hirschwald. Pp. 350.

Schmidt-Rimpler, H.: Die Erkrankungen des Auges in Zusammenhang mit anderem Krankheiten. Nothnagel's Specielle Therapie, etc. Pp. 566.

Schwarz, O.: Die Bedeuting der Augenstörungen für die Diagnose der Hirn und Rückenmarkskrankheiten. Berlin. Karger. Pp. 110.

Braun, H.: Ueber die experimental durch chronische. Alkoholintoxikation hervorgenufenen Veränderungen im zentral und periperen Nervensystem. Tubingen. 1899. Pp. 98.

Loeb, J.: Einleitung in die vergleichende Gehirnphysiologie und vergleichende Psychologie mit besonderer Berucksichtigung der Wirbellosen Thiere. Barth. 1899. Pp. 207,

MENTAL AND GENERAL NEUROLOGY.

Adamkiewicz, A.: Die Functionstorungen des Grosshirns. Hannover, Kollner. Pp. 242.

Adamkiewicz, A.: Die Kreislaufsorganen in den Organen des Central nervensystems. Hannover.

Althaus, G.: On Failure of Brain Power (Encephalasthenia). Its Nature and Treatment. 5th edit. Longmans.

Andre, G.: Études neuropathologiques. Paris. Doin. Pp. 160.

Bailey, P.: Accident and Injury. Appleton. N. Y. Pp. 430.

Beevor, C. E.: Diseases of the Nervous System, London. Lewis. Pp. 447.

Church, A. and Peterson, F.: Nervous and Mental Diseases. Philadelphia. Saunders. Pp. 600. 1899.

Congrès International de Neurologie, de Psychiatrie, etc. Paris. Alcan. Pp. 228, 226, 77. 3 parts.

De Sanctis, S.: Contrasti psichici e inhibizione cerebrale. Milan.

Fere, C.: La famille neuropathique. 2 ed. Paris. Alcan.

Fernandez M.: Las neuroses del corazon. Saragossa. Pp. 89.

Gamblin, G.: De la tarsalgie dans ses relations avec les troubles du systeme nerveux. Paris. Steinheil. Pp. 63.

Gerest, J. M.: Application de la théorie des neurones a l'etude des affectiones nerveuses systematiques. Lyons. Rey. Pp. 355.

Gerest, J. M.: Les affections nerveuses systématiques et la théorie des neurones. Paris. Bailliere. Pp. 255.

Goldscheider, A. Die Bedeutung der Reize fur Pathologie und Therapie im Lichte der Neuronlehre. Leipzig. Barth.

Jaresbericht über die Leistungen und Fortschritte auf den Gebiete der Neurologie und Psychiatrie. Karger. Berlin. Pp. 1508.

Loomis, A. L. and Thompson. W. G.: A System of Practical Medicine. Vol. iv. Diseases of the Nervous System and Mind. N. Y. Lea Bros. Pp. 1120.

Mills, C. K.: The Nervous System and its Diseases. Lippincott. Philadelphia. Vol. i. Pp. 1056.

Möbius, P. J.: Vermischte Schriften. 5th heft. Leipzig. Barth. Pp. 17.

Oppenheimer, H.: Lehrbuch der Nervenkrankheiten für Aertzte und Studirenden. 2 ed. Karger. Berlin. Pp. 999.

Pick, A.: Beiträge zur Pathologie und pathologische Anatomie des Centralnervensystems. Berlin. Karger. Pp. 332.

Robin, A. (Ed.): Traité de thérapeutique applique. Maladies du système nerveuse. Paris. Rueff. Pp. 1944.

Sommer, R.: Lehrbuch der psycopathischen Untersuchungsmethoden. Berlin. Pp. 399.

MEDICAL JURISPRUDENCE, ETC.—LEGAL MEDICINE.

Gribble, J. D. and Hehir, P.: Outlines of medical jurisprudence for India.

Von Hoffmann, E.; Atlas manual de médecine legale. French Trans. Paris. 1899. Pp. 169.

Von Hoffmann, E.: Atlas Manual of Legal Medicine. English by F. Peterson. Saunders. 1899.

Schuldheis, G.: Medicolegal studies. Swedish. Upsala. Pp. 264.

Albint, D.: L'aborto criminoso nel diritto penale e nella medicina legale con cenni di storia, etmografia e statistica. Roma. 1898. Pp. 295.

Handen, S.: Haandbog i Medicinallovgivning. Kopenhagen. 1898. Pp. 295.

Angiolella, G.: Manuale di antropologia criminale ad uso dei medici e degli studenti di medicina e giurisprudenza. Vallardi. 1898. Pp. 335.

Clevenger, S. V.: Medical Jurisprudence of Insanity or Forensic Psychiatry. New York. Pp. 1423.

CRIMINAL ANTHROPOLOGY, ETC.

de Fleury, M.: L'ame du criminal. Alcan. Pp. 192.

Aletrino, A.: Twee opstellen over criminalle anthropologie. Amsterdam. 1898. Pp. 130.

Sontarel, G. A.; Contribution a l'étude des obsessions—inhibitions et en particular de l'inhibition génitale. Bordeaux. 1898. Pp. 101.

Angiolella: Loc. cit. (Med. Jurisprudence.)

PSYCHIATRY, ETC.

Morselli, E.: Manuale de semeiotica delle mallatie mentali. 2 ed. Vallardi. 1898. Pp. 557.

Daunemann, A.: Die psychiatrische Klinik zu Giessen. Ein Beitrag zur Practischer Psychiatrie. Karger. Pp. 120. 1898.

Lewis, B.: A Text-Book of Mental Diseases. 2 ed. Griffin. Pp. 609.

Kraplin, E.: Psychiatrie. 6th edit. Barth. 1899. Pp. 800.

Finzi, J.: Breve compendio di psichiatria. Hoepli. Pp. 222.

Furstner, C.: Wie ist die Fürsorge für Gemuthskranke von Aertzten und Laien zur fordern. Karger. 1899. Pp. 64.

Dubary, A.: Les desequilibres de l'amour. Chaumel. 1898. Pp. 314.

Dore: La mort dans la paralysie générale. Paris, 1898. Pp. 82.

Rabaud, E.: Contribution a l'étude des lésions spinales posterieurs dans la paralysie générale. Paris. Pp. 112.

Faure, L.: La thérapeutique des obsessions. Paris. Pp. 68.

Leroy, E.: Étude sur l'illusion de fausse reconnaiscances chez les aliénes et les sujects nomaux. Paris. Pp. 249.

Truelle, V.: Étude critique sur les psychoses dites post operatoires. Paris. Pp. 111.

Wilson, A.: The Brain Machine; Its power and weakness. Churchill. Pp. 157.

Peterson, F.: Mental Diseases. (See Church and Peterson, loc. cit.)

Berkhan, O.: Ueber den Angeborenen und fruh erworbenen. Schwachsinn: Vieweg. 1899. Pp. 64.

PSYCHIATRY—GENERAL.

Burr, C. B.: Primer of psychology and Mental Disease. 2 ed. Philadelphia. Davis. Pp. 125.

Clark, A. C.: A Clinical Manual of Mental Diseases. N. Y. Wood. Pp. 484.

Clevenger, S. V.: Medical Jurisprudence of Insanity or Forensic Psychiatry. New York. Pp. 1423.

Clouston, T. S.: Clinical Lectures on Mental Diseases. 5th ed. London. Churchill.

Finkelnburg, K.: Ausgewählte Abhandlungen und Vorträge aus den Geheiten der Hygiene und Psychiatrie. Berlin. Hirschwald. Pp. 289.

Ireland, W. W.: The Mental Affections of Children; Idiocy, Imbecility and Insanity. London. Churchill. Pp. 448.

Laehr, H.: Die Dartellung krankhafter Geistezustände in Shakespeare's Drama. Stuttgart. Heff. Pp. 200.

Mairet et Vires: De la paralysies générale, étiologie, pathogénie, traitement. Paris. Masson. Pp. 225.

Mattos, J. de: A paranoia. Lisbon. Pp. 190.

Max-Simon, P.: Les maladies de l'esprit. Paris. Bailliere. Pp. 319.

Möbius, P. S.: Ueber das Pathologische bei Goethe. Leipzig. Barth. Pp. 205.

Poirson, G.: Du rôle du l'alcool dans l'étiologie de la folie. Nancy Gerardin. Pp. 99.

Soucail, P.; Contribution a l'étude des lésions spinales dans la paralysie générales. Toulouse. Pp. 127.

GENERAL RELATION OF MIND AND BODY.

Allievo, G.: Il sistema delle potenze umane ed il loro rapporto col l'anima. Asti. 1898.

Barker, L. F.: The Anatomy and Physiology of the Nervous System and Constituent Neurones, as revealed by Recent Investigations. Appleton. N. Y. 1898.

Biedermann, W.: Electro-Physiology. Trans. F. Welby. Vol. xi. Macmillan. London.

Boari, E.: Elementi di Anatomia, semiologia e diagnostica del sistema nervosi. Bologna. Pp. 200.

Erdmann B. und Dodge, R.: Psychologische Untersuchungen über das Leben auf experimenteller Grundlage. Halle. Pp. 360.

Farges, A.: Il cervello, l'anima e le facolta. Sienna. Pp. 400.

Foster, M.: A Text-Book of Physiology. Part 3. The Nervous System. London. Macmillan. Pp. 300.

Fusari, M.: Sistema nervosa centrale. Modena. Pp. 236.

Foster, M.: On the Physical Basis of Psychical Events. Manchester.

Hochfeldt, H.: Psychologisches un Physiologisches aus der Deutschen Schweiz. Leipzig. Wiegand.

Lasson, A.: Der Leib. Berlin. Gaertner.

Orschansky, I. G.: Mechanism of Nervous Processes. St. Petersburg. Pp. 599.

Panizza, M.: I movi element della Psicofisiologia. Loescher. Rome. Pp. 140.

Pollack, B.: Die Farbetechnic des Nervensystems. 2 edit. Karger.

APHASIA.

Bastian, H. C.: Aphasia and other Speech Defects. London. Lewis. Pp. 314.

Collins, J.: The Genesis and the Dissolution of the Faculty of Speech, a Clinical and Psychological Study of Aphasia. N. Y. Macmillan. Pp, 432.

Garnot, P.: Étude sur l'écriture ou langage écrit et sur les troubles au point de vue médico-legal. Lyon. Pp. 64.

Gutzman, H.: Das Stöttern. Frankfort. Rosenheim. Pp. 467.

Hepp, O. E.: Geistestörungen bei traumatischer Aphasie. Tübingen Pietzker. Pp. 42.

Huschens, J.: Die gewöhnlichen Sprachstörungun und ihre Bekämpfung durch Schule und Familie, in kurzer und populärer Weise dargestellt. Zurich. Fussli.

SENSE ORGANS.

Panegrossi, G.: Contribute allo studio anatomo-fisiologico dei centri dei nervi oculo-motori dell'uomo. Rome. Pallotta. Pp. 53.

Frost, W. A.: The Fundus Oculi with an Ophthalmoscope; 2 vols. Pentland. Pp. 1124.

Goldscheider, A.: Gesammlte Abhandlungen. Band i. Hautsinnerven. 11. Muskelsinn. Leipzig. Barth. Pp. 432–232.

Maddox, E. E.: Tests and Studies of the Ocular Muscles. Bristol. Wright. Pp. 442.

Politzer, A.: La dissection anatomique de l'organe auditive de l'homme. Tr. Schiffers. Liege. Desoer. Pp. 282.

Reddingius, R. A.: Das Sensomotorische Werkzeug. Engelmann. Pp. 138.

Tschnerning, M.: Optiqe physiologique. Paris. Carre. Pp. 335.

Parinaud, H.: La vision. Étude physiologique. Paris. O. Doin. Pp. 218.

Stöhr, A.: Zur Hypothese der Sehstoffe und Grundfärbe. Leipzig. Deuticke. Pp. 103.

CHRONIC POISONING.

Lombroso, C.: Die Lehre von der Pellagra. Tr. from the Italian. Coblentz. 1898.

Fromme, A.: Die Missbrauch von Morphium und Cocain und seine schönende Behandlungsweis. Second ed. Leipzig. 1898. Pp. 132.

Braun, H.; Loc. cit.

SPECIAL PSYCHOLOGY—SEXUAL PSYCHOLOGY.

Stinzig, R.: Schlaf und Schlaflosigkeit. Erfurt. Villaret.

Tissie, P.: Les reves. Psychologie et physiologie. Second ed. Paris. Alcan.

Wreschner, A.: Methodologische Beiträge sur psycho-physichen Messungen. Leipzig. Barth. Pp. 238.

Stern, L. W.: Psychologie der Veränderungsauffassung. Breslau Preus & Junger. Pp. 264.

Lautenbach, R.: Die Geometrischoptische Mauschungen und ihre psychologische Bedeutung. (New Literature.) Zeitschrift f. Hypnotismus. 8, pp. 28–39.

Oddi. R.: L'inhibitizioni dal punto di vista fisio-pathologico, psicologica e sociale. Turin. Broca. Pp. 166.

Marshall, H. B.; Instinct and Reason. London. Macmillan. Pp. 574.

Roux, J.: Psycologie de l'instinct sexuel. Paris. Masson.

Barrucco, N.: Die Sexuelle Neurasthenia und ihre Beziepung zu den Krankheiten der Geschlechtsorgane. O. Salle. Pp. 177.

Scott, J. F.: The Sexual Instinct. Treat., N. Y. Pp. 436. 1899.

Rohleier, H.: Die Masturbation. Eine Monographie für Aerzte u. Pädagogen. Fischer. Pp. 319.

Lowenfeld, L.: Serualleben und Nervanleiden. Second ed. Bergmann. 1899. Pp. 262.

SEXUAL PSYCHOLOGY.

Janet, P.: Nevroses et idées fixes. Paris. Alcan. Pp. 492.

Krafft-Ebing, R. V.: Psychopathia Sexualis. Tenth ed. Stuttgart. Enke. Pp. 376.

Krafft-Ebing, R. V.: Psycopathia Sexualis. Translation. F. A. Davis Co.

Moll, A.: L'inversione sessuali. Tr. Rome.

Pujia e Bicuchi: Degenerazione psico-sessuale. Rome. Capaccini.

Raymond, F., et Janet, P.: Nevroses et idées fixes. 11. Paris. Alcan. Pp. 559.

Souleyre, C.: Neurasthenie et génitopathies féminines. Paris. Bailiere. Pp. 212.

Thoinot, L.: Attentats aux moeurs et perversions du sens génital. Paris. Doin. Pp. 519.

Wille, W.: Die Psychosen des Pubertatsalters. Leipzig. Deutike. Pp. 218.

Zuccarelli, A.: Psychiatria e organe psicho. Naples. Gambella. Pp. 68.

EPILEPSY—NEURASTHENIA—HYSTERIA.

Arden-Delteil, P.: L'épilepsie psychique dans ses rapports avec la criminalitie et l'alienation mentale. Paris.

Bonfigli, C.: Idée fisse e nevrasthenie. Milan. Vallardi. Pp. 73.

Bourneville: Recherches sur l'épilepsie, l'hystere et le idiotic. Paris. Alcan. Pp. 200.

Deutsch, M.: Die Ursache und Heilung der Epilepsie. Second ed. Berlin. Steinitz. Pp. 131.

Eyrand, G.: Contribution a l'étude la simulation de l'hysterio-neurasthenie traumatique. Lyons. Pp. 51.

Gelibert, A.: De l'hemiosialemese. Variété de hématémèse hysterique. Lyon. Bourgeon. Pp. 223.

Kann. A.: Nervosität und Radfahren. 2d and 3d ed. Berlin. Steinitz.

Lowenfeld, L.: Pathologie und Therapie der Neurasthenie und Hysterie. Wiesbaden. Bergmann. Pp. 744.

Moll, A.: Das nervose Weib. Berlin. Fontane. Pp. 226.

Ots Y Esquerda, V.: La neurastenia. Madrid. Fussel. Pp. 303.

Stewart, T. G.. Lectures on Giddiness and on Hysteria in the Male. London. Pentland, Pp. 89.

Tourette, G.: Les états neurastheniques. Paris. Halliere. Pp. 92.

Ziehen, T.: Neurasthenie. Vienna. Urban. Pp. 77.

NEURASTHENIA—HYSTERIA—EPILEPSY.

Dubois, H.: Des atrophies musculaires d'origine hysterique. Paris. 1898. Pp. 77.

Ballard: Commens meurent les épileptiques. Paris. Pp. 142.

Martin, G.: Etude sur la neurasthenie a l'état mental des neurastheniques. Paris. Pp. 111.

Ardin-Delteil, P.: Epilepsie lawée et equivalents épileptiques. L'Epilepsie psychique, ses rapports dans l'alienation méntale e la criminalité. Bailliere. Pp. 275.

HYPNOTISM.

Bechterew, W. von: Suggestion und ihre soziale Bedeutung. Leipzig. Georgi. Pp. 84.

Belfiose: Magnetismo e ipnotismo. Milan. Hoepli. Pp. 377.

Conconnier, M. T.: L'hypnotisme en France. Paris. Lecoffre. Pp. 430.

Desfosses, D. G.: Magnétisme vital. Paris. Ed. Scientif. Pp. 335.

Huter, C.: Die neueste Heilwissenschaft oder die psycho-physiologische Naturheilkunde. Detmold. Pp. 425.

Levy, P. E.: L'Éducation rationalle de la volonté, son emploie thérapeutique. Paris, Alcan. Pp. 234.

Lipps, T.: Suggestion und Hypnose. Munich. Straub. Pp. 131.

Meacheam, L. J.: Lessons in Hypnotism. Pp. 159.

Ricoux, F.: Contribution a la généralization du traitment moral de l'alienation mentale. Nancy. Pp. 120.

Sidis, B.: The Psychology of Suggestion. Appleton. Pp. 386.

Verworn, M.: Die sogenannte Hypnose der Thiere. Fischer. Jena. Pp. 92.

Wachtelborn, K.: Der Hypnotismus, seine Wesen und sein. Wert. Leipzig. Frederick.

Ardigo, R.: L'unita della coscienza. Padua. Pp. 531.

Beranger, A.: Considerations Psychologique sur l'agonie. Lyon. Störck. Pp. 66.

Binet, A., et Henri, V.: La fatigue intellectuelle. Paris. Schleicher. Pp. 338.

TELEPATHY—MYSTICISM, ETC.

Adriani: Télépathie, suggestie en hallucinationes. Noordhoff.
Bois, J.: La Sanatisme et la magie. Paris. Chailley.
Dupouy, E.: Sciences occultes et physiologie psychique. Paris. Pp. 320.
Giacchi, O.: La psicotelegraphie. Forli.
Pappa Iardo, A.: Spiritismo. Milan. Hoepli.
Robinson, W. E.: Spirit Slate-writing and Kindred Phenomena. N. Y. Munn & Co. Pp. 155.
Scotti, G.: Lo spiritismo e i nuovi studi psichii. Bergamo. Conti. Pp. 82.
Surbled, G.: Spiritualisme et spiritisme. Paris. Tequei.
Chabaneix, P.: Le subconscient chez les artistes, les savants et les ecrivains. Paris. Bailliere. Pp. 126.
Kuhner, A.: Schlaf, Schlaflosigkeit, und Schlafmittel. Leipzig.
Schleich, C. L.: Schmerzlose Operationen. Third edition. Berlin-Springer. Pp. 276.
Schofield, A. T.: The Unconscious Mind. London. Hodder. Pp. 436.

I am unprepared to give you even an outline of the genuine progress made in the sciences compassed by the bibliography just cited. I am inclined to single out, however, one seemingly unimportant thing from this great array of monographs for special comment. It is a book of one hundred and twenty pages[2] bearing the date 1899, and is a description of a psychopathic hospital in a German city, the newest and finest of them all. Many neurologists would find, perhaps, little in such a volume to interest them, but such as have had asylum experience, or are familiar with the needs of the insane, will hail its publication with enthusiasm, for it describes a method of provision for the insane and a scheme of laboratory investigation, a model psychiatric institution, which is destined to be imitated in many of our larger cities before many years have passed. I shall not dwell long upon the subject here, because I have quite recently published an address, delivered two weeks ago as the Annual Address to the American Medico-Psychological Association, in which the new era in psychiatry and psychiatric methods is discussed in detail. Suffice it to say then that this psychopathic hospital in the town of Giessen, which, modified to suit varying conditions and circumstances, is to be the model for similar foundations in all your American cities of 50,000 to 100,000 inhabitants, consists of ten or eleven cottages for some 116 patients. It is situated near the other university buildings. The central structure contains laboratories for pathologic, microscopic, chemical, photographic and psycho-physical work, besides a mechanical workshop, clinical auditorium, library and polyclinic or dispensary for out-of-door patients. The administrative offices and rooms for assistant physicians are also here. The cottages afford accommodations for each sex, and the patients are divided into private, quiet, restless, suicidal and disturbed classes in separate buildings.

There are many of these psychopathic hospitals in Germany. Indeed, only one university town is now without one. I saw them in successful operation even in my student days at Strassburg, Leipzig and Vienna. This at Giessen was first opened for patients in 1896, and deserves special mention and consideration because it embodies all that is best in this species of institution, the management having profited by the experience of all the others up to the date of its construction. The psychopathic hospital solves many problems, among them improved opportunities for collaborative study by scientific investigation in different branches of research, better facilities for clinical study, a greater diffusion of a knowledge of psychiatry among practitioners and students, and last, but not least, earlier and speedier treatment of the unfortunate patients.

The psychopathic hospital for the acutely insane located in the midst of the city, following the precedent of general hospitals in this regard, is the ideal institution of the future for this particular class. The chronic insane on the other hand will be transferred to the country, always in the neighborhood of the city having the detention hospital, and will there be cared for in colonies, for the colony or village system has proved to be the ideal method of cure for the chronic insane. The colony will consist of a small hospital for the sick and injured, a small infirmary for the infirm, crippled, bed-ridden and disturbed cases, and a multitude of small cottages clustered about the centers of industry, where the majority of the patients will occupy themselves with agriculture and handiwork of all descriptions. This colony system or village community system is not new and I have myself seen several of them successfully conducted in other countries.

I will not occupy your time longer by entering into the minutiæ of these two methods of state care of the insane, but I thought I would exercise the prerogative of chairman, in calling your attention to the psychopathic hospital and the colony as among "the improvements in methods of work" referred to in the By-Laws above quoted. A little seed disseminated in this way will take root somewhere, spring into existence, and some day bear fruit. Perhaps a few years hence some of you may describe to us here in this Section the model institutes for psychiatry you have builded in your cities and point out to us the great improvements you have made on old-world models.

[2] Die Psychiatische Klinik zu Giessen. Published by S. Karger, Berlin, 1899.

Original Articles.

APPENDICITIS.*

ITS DIAGNOSIS AND TREATMENT: A REPORT OF ONE HUNDRED AND TWELVE CASES.

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As a preface to my remarks, I wish to submit a report of 112 cases that came under my observation, 82 of which were treated by operation and 30 by medicinal measures. In submitting this report I have not attempted a detailed outline of each case, as there is a sameness in many of the cases that would make such an outline monotonous. I have, therefore, grouped similar ones.

Of the 82 cases operated on there were 2 fatalities. One of these was operated on the fifth day, and had diffuse suppurative peritonitis. The other patient was one of chronic appendicitis, and the cause of death was obscure. Immediately after the operation she began vomiting coffee-ground material, and continued to do so until her death, which occurred seventy-two hours later.

The ages of the patients, grouped in decades, were as follows:

Under 10	10
10 to 20	25
20 to 30	28
30 to 40	20
40 to 50	19
50 upward	10

Of the operated cases 30 were acute and 52 chronic or recurrent. In speaking of acute cases I refer to those giving no history of previous attacks. Of the 112 cases reported, 45 cases were females, and 67 males.

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In 9 cases the operation was made within twenty-four hours after the attack. The appendix was ruptured in 5 of these, and coprolites found escaping through the opening. In the other 4 the appendix was inflamed, the mucosa showing pathologic changes, and the surrounding tissues more or less involved. In 17 cases operated within forty-eight hours of the attack, the appendix was gangrenous in 10. This was caused from one or more strictures occluding the canal, the presence of concretions, and the intensity of the inflammation due to the virulent matter coming in contact with peritoneal surface. The omental folds were more or less adherent and gangrenous. In 7 cases the lumen of the appendix was intact, but there was inflammation of the surrounding tissues with adhesions; and in 4 cases dilatation of the proximal ends; coprolites were found in 9 of this group. Twenty-three cases were operated within seventy-two hours. In 20 of these the appendix was gangrenous in some portion. Localized abscesses existed in 20. The remaining 3 were cases of catarrhal appendicitis with more or less inflammation of the surrounding tissues. In 25 cases the operation was made after the third day, and as late as three weeks. There were abscesses in 20 of these. One had diffuse suppurative peritonitis, and died from the operation, and 5 cases were catarrhal. The mucosa of the appendix was more or less diseased, but the lumen was unobstructed. The appendix was more or less gangrenous in all the cases where there was an abscess. In 9 the appendix was not removed. It was found imbedded in the granulation tissue forming the wall of the abscess. In 16 cases operated between the attacks, the appendix was obliterated in one. The tenderness and pain in this case were due to adhesions surrounding the cecum. There had evidently been an abscess in some former attack, and the contents had passed off through the bowel. Coprolites were found in 25 cases, foreign bodies in none, strictures in 19. Fecal fistula followed in 4. These closed spontaneously in the course of a few months. Hernia, so far as I have been able to ascertain, followed in 6 cases. In every instance this sequela followed in the cases where the abscess was adherent to the peritoneal wall. The appendix was found attached to the right ovary in 5 cases; to the right Fallopian tube in 7; to the uterus in 4; in one case to the gall-bladder; in 3 cases I found the appendix attached to the sac of irreducible inguinal hernias.

I have made eighty-four operations for appendicitis, and was mistaken in my diagnosis in two. One of these was a cholelithiasis; the gall-bladder was dragged down to the ileocecal fossa, and presented a tumor with the outlines of an appendicular abscess; thirty gall-stones were removed. The other case was a pyosalpinx, with the tumor extending into the iliac region. In this case, however, the appendix was attached to the tumor, and the distal extremity much inflamed.

Of the 30 cases treated medicinally, 8 died from septic peritonitis; 12 of the 22 who recovered had recurrent attacks; of the remaining 10 cases I am unable to give any history.

An operation was advised in quite a number of these cases, but, owing to the objection of friends and the attending physician, it was not made. In 5 cases of those that died I refused to operate, owing to the condition of the patients at the time I saw them.

It has been my observation rather than my experience, that where there is profound septicemia, complete paresis of the bowel, with a pulse-rate entirely out of proportion to the temperature, an operation is useless.

The percentage of deaths in the 82 cases operated is 2.4, the percentage in those treated medicinally is 26.6.

I have tried to summarize the lessons that I have learned from these cases. Several important facts bearing upon the pathologic conditions, diagnosis, and treatment of appendicitis have been settled in my mind. I am fully aware that other surgeons have had a much wider experience than mine; but the examination of their statistics does not develop any material points of difference from the conclusions that I have reached.

As it is not my purpose to consider the pathologic conditions in this paper, I will pass from this part of the summary and take up the matter of diagnosis.

Few diseases have a more uniform set of symptoms than appendicitis. There are, however, two types of cases; one having typical symptoms, and the other atypical symptoms. The typical symptoms of appendicitis, as we understand them, are: 1, the sudden onset of attack; 2, the character and location of the pain; 3, tenderness in the right ileocecal fossa, and muscular rigidity; 4, nausea, and perhaps vomiting, with more or less febrile action.

If these symptoms were all present in a given case, there could scarcely be any mistake in diagnosis; but unfortunately they are not all present at the same time. Any one or two of them may be absent, or being present, may be due to some other disease. For instance, the sudden attack is generally characteristic of abdominal trouble. Acute peritonitis, from whatever source, may give rise to the same symptoms.

Pain is also a variable symptom, both as to location and intensity. While pain in typical cases is usually near the umbilicus, radiating over the abdomen, it may be at other points. Its location depends largely upon the location of the appendix. If the appendix extends upward toward the gall-bladder, the pain may be very easily mistaken for cholecystitis. If the appendix be behind the ascending colon, the pain may be mistaken for renal colic. In this location the pain will sometimes extend to the testicle, the same as in renal colic. Again, the sympathetic nervous system often plays an important role as to the location of the pain. Physicians are all familiar with the pain in the right shoulder in cases of peritonitis. This reflex pain may be deceptive, but if the local conditions are carefully examined the deception is easily determined. There may be an entire absence of pain. While this fortunately is not the fact in many cases, yet it is one that must be recognized in making a diagnosis. Pain does not always indicate the pathologic conditions. It has not been very long since surgeons attempted to point out how the pathologic conditions could be determined by the character of the pain. Experience has taught us, however, that this is radically wrong. I shall speak more of this, however, under the head of treatment. We now understand that pain may be indicative of gangrene, or it may on the other hand, indicate resolution.

Tenderness and muscular rigidity in the right ileocecal fossa are nearly always pathognomonic of a diseased appendix. In the onset, tenderness may exist in a large area, but in a short time it becomes limited and confined to the ileocecal region. Tenderness always varies according to the location of the appendix. As suggested when speaking of the variableness of pain, tenderness may be absent; and when it is absent, it may be due to a gangrenous condition, or one of resolution. Rigidity of the muscles on the right side of the abdomen is an important symptom. With rigidity of the muscles on the right side of the abdomen, and its absence on the left, there

can be scarcely any doubt as to the location of the trouble. Constipation usually exists, although this is not properly a diagnostic symptom. Nausea and fever go to make up the picture that completes the diagnosis. Fever is a variable symptom. The temperature may be quite high during the first twenty-four hours, and then subside, remaining low, although important pathologic changes are taking place. Nausea and vomiting may be present in the first twenty-four hours, but usually subside after that.

Tumor as a secondary symptom is important. It existed in about 35 per cent. of the cases reported in this paper. A tumor is not always indicative of pus. In a number of cases I have found the swelling due to the enlargement of the glands of the mesentery and the infiltration of the tissues surrounding the cecum and appendix. In one case the cellular tissues beneath the peritoneum were swollen to the size of a small orange. Tympanites is a constant symptom in acute cases, and one of considerable diagnostic value.

Another important factor that has been established beyond question, is that in males peritonitis has its origin almost exclusively in the appendix; while in females the Fallopian tubes, as well as the appendix, are important factors in the production of peritonitis. These points should be borne in mind in determining the source of peritonitis in any given case. It might be supposed, if this observation is true, that females, owing to their double exposure, would suffer more from peritonitis than males. Statistics show that this is probably true. It seems that males are more prone to appendicitis than females. I have recently noted some statistics where this statement is not borne out; but from my own experience, and that of many others, the ratio is about 60 per cent. male to 40 per cent. females.

Leucocytosis is a condition that takes place in the blood in all acute inflammatory diseases. It is, therefore, of value in determining the presence of pus in appendicitis. The leucocytes increase in proportion to the destructive changes taking place. This important blood-change may also furnish valuable points in differentiating from typhoid fever, floating kidney, fecal impaction, hepatic and renal colic. In general practice, however, I doubt very much if a blood examination, considering the technical skill required, would be of much value. I have not made blood examination a routine practice even in the hospital. In cases where there existed some doubt as to the presence of pus, examination of the blood was made, and in every case where a high degree of leucocytosis existed, an operation developed pus. All the cases examined were operated, and pus was found in them. The degree of leucocytosis, according to these cases, seems to be determined by the amount of destruction going on in the abdomen.

Evidence of the existence of the disease may be determined by skilful palpation. It is best made by Edebohl's method:

"The patient lies on his back with limbs flexed at the hips. Placing three or four fingers of the right hand flat on the abdomen, we feel for the margin of the right rectus muscle, in the line between the navel and the anterior superior spine of the ilium. The fingers are introduced with a light, steady pressure under the margin of the rectus until we feel distinctly the pulsation of the common iliac artery. The appendix is felt, as a rule, just outside the artery, its insertion about an inch distant, while its tip often crosses the artery. We move the fingers slowly outward as soon as we feel the pulsation of the artery and note with care the condition of the posterior abdominal wall—that is, the iliopsoas muscle covered with the iliac fascia. This is the point of resistance against which we compress the appendix and which makes it possible to palpate it." When there is much tenderness and rigidity of the muscles, it will be almost impossible to feel the appendix; and again, if the appendix extends upward behind the colon, it cannot be discovered. However, with experience, a skilful manipulator will be able to determine the outlines of the appendix in a large percentage of cases.

The pulse and temperature considered together are important. A high temperature with a high pulse indicate simply an acute inflammatory process. When the pulse and temperature part company, serious pathologic changes have taken place. A low temperature with a high pulse indicates a toxemia that bodes ill to the patient.

There are other points in the differential diagnosis that might be mentioned. Renal colic is perhaps one of the most difficult cases from which to differentiate. We, however, should bear in mind that in appendicitis, while the pain is constant it is progressive in its intensity, and in renal colic while the pain is constant, the intensity is not increased. In renal colic, when the pain ceases, it ceases instantly; in appendicitis it ceases gradually.

Then again, in a limited number of cases where the appendix is behind the colon, the pain may extend to the testicle, the same as in renal colic. If other characteristic symptoms of appendicitis are present and the peculiar progressive character of the pain is recognized, it is possible to differentiate from renal colic.

In gall-stone colic there is nausea and vomiting, and they usually continue for several days; in fact, the gastric disturbance is characteristic of disease of the gall-bladder. The location of pain in gall-stone colic is in the epigastrium, and it radiates toward the shoulder and scapula. The seat of tenderness is also usually over the gall-bladder, while in appendicitis it is over McBurney's point.

In the female there may be some difficulty in differentiating between appendicitis and salpingitis. In the early stage the differentiation can be made much more readily than later when pus has formed. The main points of difference are the acuteness of the attack in appendicitis, and its tendency to recurrence. The pain in appendicitis is more acute, and the location of the tenderness is different. A vaginal examination will reveal the seat of tenderness to be in the right pelvis; while in appendicitis the pelvic organs will not be tender. Chloroform narcosis may be necessary to complete a satisfactory examination.

The controversy that has been waged during the last decade as to whether appendicitis should be classed as a medical disease, a mixed disease, or a surgical disease, has been decided largely in favor of the surgeons. Some of our medical brethren still hold that appendicitis is both a medical and surgical disease, coming within the purview of the surgeon when the physician has failed to cure. I maintain that it is the consensus of opinion of the profession to-day that appendicitis is essentially a surgical disease, and should be treated from that standpoint. If there is any doubt as to the correctness of this view, a consideration of its pathology, and the entire absence of any remedial measures that will remove the pathologic conditions and bring about resolution, should be enough to definitely settle the question. There are certain remedies that may be prescribed to an advantage.

It is necessary when the pain is excruciating to resort to measures to relieve it. It may be necessary to relieve the bowels of impacted fecal matter, and to increase the action of the kidneys. Beyond this I have no confidence in medicinal measures. Remedies that simply give the patient a measure of relief without looking to an ultimate cure should not be relied upon other than for emergencies. The question settled that in surgery alone lies the hope of permanent cure in cases of appendicitis, the next question is to consider the time to operate.

Some of the leading surgeons of to-day have set forth the dictum that the patient should be operated upon as soon as the diagnosis has been made. With proper qualifications, I believe this to be the correct position. These qualifications are much the same as those that obtain in other surgical diseases. The same difference of opinion exists with reference to the amputation of an injured limb while the patient is in shock. There is no difference of opinion as to the necessity of the operation, but there is a question as to the most opportune time. This matter has largely resolved itself into one of judgment on the part of the surgeon; in other words, it is not a matter of prescribed rules, but one of surgical acumen. When a diagnosis of appendicitis has been made, the judgment of the surgeon should govern the time at which the operation should be performed. When I make the qualification that the judgment of the surgeon should point out to him the most opportune time for the operation, I mean that conditions that cannot be specified nor described by fixed rules may exist. It is my conviction, and it has grown stronger with more extended experience, that the earlier the operation the better for the patient. If the diagnosis is made within twenty-four hours of the attack, and the environments are such that the operation could be made, I believe there should be no delay. It is my rule at the present time to operate upon all cases as soon as I have made the diagnosis, if the condition of the patient is favorable, and his environments are such as to justify a surgical operation. I recognize no time limit.

It is unnecessary to describe the environments that might cause a postponement of an operation. These are obvious to every one who is familiar with modern surgery. There may be complications in the case that should be removed or corrected before operating. The conditions unfavorable to an immediate operation are not well defined. Rules elaborated a few years ago for our guidance are useless to-day. Some good surgeons advise, when the patient is seen after the third day, that operation should be postponed until after the attack, or until purulent formations, if such exist, have been walled off, and the patient is practically rid of general sepsis. I have operated after the third day, and during the attack, without any fatal results. My experience does not coincide, therefore, with this rule. During the last two years, I have not delayed operation longer than was necessary to give the patient advantage of the best possible surroundings.

General septic peritonitis might be considered a cause for delay, and, perhaps, for no operation at all. One of my fatal cases was of this type. I do not believe in last-resort operations. While they are sometimes successful, they are more often fatal. I have seen some desperate cases get well, but they were of the fibrinosuppurative type. The suppurative peritonitis is a more virulent condition, and the prognosis more grave.

There is a question as to the feasibility of operating between the attacks of recurrent appendicitis. We are often confronted with the proposition that an operation will be submitted to after the existing attack has subsided. In the interim, if the patient is fortunate enough to recover, gratuitous advice both from neighbors and physician to wait until another attack, with the hope that it may not come, prevails, and there is another delay, jeopardizing the life of the patient. I can see no reason for treating these cases differently from those in a first attack.

Again, I do not believe the time for operation depends altogether upon the pathologic conditions we find in the patient at the time of our first visit. Some surgeons endeavor to divide the cases into classes, and to divide the time limitation for operation by the pathologic conditions found in each of these cases. When we consider that it is impossible to determine by examination the true pathologic conditions, these rules become ridiculous and unsatisfactory.

In a number of cases that I have operated on within twenty-four hours of the onset, I have found the appendix ruptured, and coprolites in the viscera, and a gangrenous condition of the surrounding tissues. Again, I have found in a large number of cases where the acute symptoms of the first twenty-four hours had subsided, with a temperature of 100 and a pulse corresponding, that an abscess had already formed. With this uncertainty as to the pathologic conditions, I cannot see the necessity, or the good judgment, of postponing an operation. Conservative surgeons (so-called) and physicians will tell us that a certain number of these cases will get well without an operation. They do not, however, tell us how many get entirely well. It is a matter of statistics that about 80 per cent. recover from the first attack. Of these we have no statistics to definitely determine the number in which the attacks are recurrent. Nor have we statistics that throw much light upon the complete recovery of the remainder. Because 80 per cent. of these cases get over the first attack is no reason why early operations should not be made. When statistics show a mortality of less than 5 per cent., with recoveries that are permanent in a large majority of the cases, there can be scarcely any question as to the feasibility of operating early. It seems to me in the light of experience and modern success, that the question of when to operate should be entirely one of surgical acumen, governed by the conditions of environment and complications.

Surgeons have exercised their ingenuity in devising methods of operating, and have established certain principles in the technic that make it an easy matter for those of less experience to select a safe and reliable method. The primary purpose is the obliteration of the appendix. The preparation of the field of operation is a matter of detail differing in no way from other abdominal operations.

The location of the incision is largely one of choice with the operator. It is my experience that no fixed rule can be followed. In some cases the incision should be made obliquely from without inward, well down toward Poupart's ligament; in others, along the outer border of the rectus muscle. It depends upon the location of the appendix and the diseased portion.

The length of the incision, while an important factor, depends upon the character of the trouble. An incision not exceeding one inch in length is sufficient for a large number of cases; but there are cases where it is necessary to make it four or five inches long. In abscess cases where the abscess wall is not adherent to the parie-

tal peritoneum, the incision should be of sufficient length to permit free access to the parts, and for packing with gauze to prevent the pus from permeating into other parts of the abdominal cavity.

The disposition of the appendix is a matter of some importance, but this depends largely upon the condition of the organ. In catarrhal appendicitis where the lumen of the organ is not constricted, it can be invaginated and carried within the bowel. The meso-appendix is ligated in several places, and cut close to the organ. With a probe or fine mouse-toothed forceps the extremity of the appendix is inverted, and pushed through the lumen into the bowel until the organ is disposed of. Three or four Lembert sutures are sufficient to close the opening. The question of the ultimate disposition of the appendix is not very well settled, but it is safe to presume that it will cause no trouble.

The next method, that of excision, is accomplished in various ways. The meso-appendix is tied off in sections, and if there are adhesions, they are broken up. The appendix and the cecum should be brought up through the incision, and gauze packed around them. The peritoneal coating is cut through about one-half inch from the cecum and stripped to the base. The appendix is then excised, and the stump inverted into the bowel. The peritoneal cuff is then inverted, and the opening closed with Lembert sutures. This is, perhaps, the simplest and safest method for ordinary cases. I have used the clamp and cautery method suggested by Dr. Eastman, but can express no particular preference for it. Where the base of the appendix is gangrenous, the surgon must exercise his ingenuity in disposing of the opening into the cecum with a view of preventing a fecal fistula. This has occurred in four of my cases.

In cases where there is a deep-seated localized abscess, a free incision should be made. The abdominal cavity should be carefully protected with gauze, the appendix excised, and the abscess and necrotic tissues removed. In these cases I make it a rule, after carefully cleansing the cavity, to place a glass drainage-tube, which usually remains about forty-eight hours. When the abscess has approached the anterior wall of the abdomen, and becomes agglutinated, it is opened and drained. I make no effort to remove the appendix in such cases. The surgeon must of necessity have sufficient experience to comprehend the various conditions that may arise in each given case, and meet them accordingly.

In nine of the cases reported I did not complete the operation. While I believe in making a complete operation, yet in this class of cases I doubt very much the expediency of doing more than draining the abscess.

Closing the incision in clean cases is a procedure that differs in no way from that of other abdominal wounds, and therefore needs no special mention.

CONCLUSIONS.

1. An early diagnosis of appendicitis is desirable and possible if the few cardinal symptoms are understood, such as pain near the umbilicus, tenderness In the ilio-cecal region, tympanites, and rigidity of the muscles in the lower right quadrant of abdomen.

2. Too much significance should not be placed upon the presence or absence of pain, and high temperature. Both may be absent, while grave pathologic conditions are going on. They may also be present to a high degree without determining the pathologic status.

3. Appendicitis is a surgical disease, and should be treated from a surgical standpoint.

4. From the nature and location of the disease there are no known remedies given internally or applied externally that can remove the trouble.

5. The pathologic conditions of a diseased appendix cannot be definitely determined by external examination, or from the existing symptoms.

6. Early operations give the best results.

7. The time for operation is when a diagnosis has been made, providing the environments of the patient are favorable, and there are no complications precluding the same.

8. The technic of the operation is governed largely by the taste of the operator and the pathologic conditions.

APPENDICITIS.*

ITS CAUSES, PREVENTION AND TREATMENT.

BY WILLIAM M. HARSHA, M.D.

Professor of Operative and Clinical Surgery, College of Physicians and Surgeons (University of Illinois Medical School).

CHICAGO.

Appendicitis is well characterized by Professor Osler as "the most important of acute intestinal disorders;" and it may be said further to bear a somewhat similar relation to active digestive disturbances that pneumonia does to acute bronchial affections.

The question most frequently asked by the people relates to the cause of the disease, the problem that most vexes the physician and surgeon is one of treatment, while the great frequency and fatality make its consideration of interest to us all. Among the etiologic factors is considered age—being essentially a disease of the young. The study of 157 cases occurring in some of the Chicago hospitals during the past year shows an average age of 26 years, the oldest in this number being 62, the youngest 1½ years. As showing the rarity of cases in extremes of life, but one of these cases was found under 7, and but three over 50 years. The writer has successfully operated on two patients, aged respectively 4½ and 5½ years for the past two years. The list referred to shows the influence of sex to correspond very nearly with Hawkins' tables—of 159 cases 93 were males, 66 females. The greater frequency in males is no doubt due to their greater exposure to injury, fatigue, colds and overindulgence in eating and drinking. The seasons affect materially the frequency of attacks—the greater number occurring during the summer months—more than half the cases under study occurring during the six months, June to November, or during the time when intestinal disorders most prevail. In the list considered the greatest number occurred in August; the fewest in the months of October and December.

While the disease is an infection, the infective agent is not uniform and the mechanical causation or excitement of the inflammation is believed to be the greater factor. Fecal concretions are found in nearly half of all the cases, sometimes bearing a nucleus of some hard, foreign body, such as a piece of bone, grape seed or bird shot; and showing evidence in their structure of their formation *in situ*. These concretions, by prolonged contact with the degenerate structure of the mucosa, make an atrium for infection or occlude the lumen and imprison secretions, bringing about distension and stasis followed by infection. The small size of the organ and its dependent position make congestive stenosis easy. Like the contracted cervix uteri or Fallopian tube, it may be patent most of the time; but congestion from dietetic errors or from sudden chilling of the surface, or

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injury by fecal masses or otherwise, may suddenly occlude its lumen and directly appendicular colic results. If this stenosis is not relieved promptly the next infective and inflammatory stage soon follows.

The most frequent exciting cause, and especially in recurring cases, is believed to be errors of diet. Constipation, which is generally accompanied by a full cecum, may induce this condition of congestion and irritation at the outlet of the appendix which causes stenosis, or by extension may sooner or later involve the entire organ. Robin[1] believes a distinct form of gastric and intestinal indigestion, with what he terms coprostasis, is responsible for most cases, and that treating this condition by castor-oil and enemata will prevent attacks. Typhoid fever, especially, and other debilitating conditions predispose to attacks. Osler cites a case where bird shot were found in the appendix. Bernays found calomel and bismuth forming nuclei of fecal concretions. From the dependent position of the appendix and the tendency of heavy substances to gravitate into the organ we may consider appendicitis—like hernia and hemorrhoids, but in less degree—a penalty imposed on man for getting on end. Traumatism and severe exertion are frequent exciting causes, as are also chilling of the surface determining the blood to the viscera.

Viewing the etiology in this light, prevention seems possible many times, although hardly demonstrable. These means of prevention apply to other conditions and have the advantage of uniform safety. The disease is so frequent and dangerous, however, that its consideration alone should lend the commonest rules of health new dignity. These are moderation at the table, careful regulation of the bowels and care in diet, prompt attention to digestive disturbances and care to avoid the ills of physical overexertion and taking colds. As Robin advises, treatment should be directed to those dyspeptic conditions attended with distension, catarrhal gastric intestinal affections or colonic torpidity. Castor-oil or salines are favorites with most physicians, and perhaps when more used in our forefathers' time prevented many attacks. Colonic flushing in fecal retention is of great value. If we shall accept the view that gastric or intestinal disturbances are possible harbingers of appendicitis, as we regard acute bronchial affections in their relation to pneumonia, we shall by timely treatment ward off many attacks. In the matter of treatment there is yet a great variety of opinion. In view of the large number of cases that recover from first attacks, and remain well, under prompt rational medical treatment, surgeons can not in my view properly recommend operation in all cases, although early operation in proper cases has lowered the mortality.

The study of eighty cases of the list referred to shows a mortality of about 10 per cent. Of cases operated on up to the fourth day all but one recovered, and that was operated on the second day. As hospital reports represent cases of more than average severity—many of the light ones being left at home—we can safely expect a much lower mortality under surgical supervision of all cases, and early operations in proper ones. If people are advised to call a physician promptly for diagnosis in cases of sore throat they should likewise be instructed to attend to stomach and intestinal disorders, as many times attacks may be warded off, or aborted after actual occurrence. In ten cases observed by the writer during the months of April and May, last past, six were distinctly attributed to, and preceded by, digestive derangements, usually two to four days elapsing between the onset of intestinal and gastric disorders and the characteristic symptoms of appendicitis.

The treatment in these cases was in general, evacuants, salines, calomel, enemata, rest in recumbency, hot (antiseptic) fomentations. If seen at the onset, this treatment is tried for thirty-six hours; except in fulminant cases, which would be operated on at once, codein is used, if urgent, to allay pain. In four of the ten cases so treated from onset, three recovered without operation. In cases seen later, operation is advised if tumor is present or temperature or accelerated pulse continues. In the dietetic and supporting treatment where liquid diet is indicated, as it is in operative or inoperative cases, as well as in many other debilitating conditions, I have used Reed & Carnick's beef peptonoids and trophinin, and Parke, Davis & Co.'s beef jelly, with the greatest satisfaction, as many patients can not take milk. In one other case of the four mentioned operation was advised at the end of thirty-six hours, but the patient began to improve then, and recovery proceeded without operation. Two of the ten cases were recurrent and were operated on in the quiescent stage. All recurrent cases should be operated on between attacks or at onset of attack. Six of the ten were operated on, and the appendix removed in all but two, in which there were abscesses. All recovered, if we may count the two last operated on, which are practically well at this writing.

Where cathartics could not be retained I have used hypodermically, a tablet consisting of physostigmin sulph., 1-50 grain, and magnesium sulph., 1.8 grain. In twelve trials catharsis was produced in four to seven hours in five cases. The strength of the magnesia solution should not be greater than 2 per cent.

103 State Street.

[1] International Clinics, Phila., 98, 8, 104.

DISCUSSION ON APPENDICITIS.*

DR. KEEN, Philadelphia—I am more radical than my friend, Dr. Deaver. He, if I understand him rightly, considers that general suppurative peritonitis is a contraindication of operation. This view I cannot accede to. The very fact that a patient has a general purulent peritonitis as the result of an appendicitis or from any other cause, means to me, instant and thorough operation, for the very reason that if you let such a patient alone he is absolutely sure to die. That the majority of those who are attacked with a suppurative peritonitis will die, operation or no operation, is certainly true—a large majority of them—but every one rescued is one rescued from the grave. That these cases are not without hope, I am absolutely certain, both from my reading and from my experience, for I could recount a half dozen cases in my own practice in which life has certainly been saved after a general infectious peritonitis—not saved simply by an ordinary operation for appendicitis, but by an incision on both sides, which will allow thorough flushing of the entire abdominal cavity.

Of the other paper, I wish to say a few words. Dr. Morris excuses his attack by alleging a *mens conscia recti*. I am reminded of two rival shoe stores on opposite sides of the same street, one of which placed on the sign: "*Mens Conscia Recti.*" The other, not to be outdown, put on his: "*Men's and Women's Conscia Recti.*"

The notice that Dr. Morris stated that he had sent to each one of the persons attacked, by some delay of the U. S. mail never reached me, and my first knowledge of it came by a verbal statement two or three days ago from a friend, notifying me that I was to be attacked. But we must remember that only a year has elapsed since the Denver meeting. He is right in saying that at the last meeting of this Section I challenged any one in the room who believed he could do a hundred abdominal sections on well patients even, and not have 2 per cent. mortality, and not a man or woman in the room

* This discussion covers a series of six papers, the other four having appeared in the JOURNAL as follows: "Best Methods in Treatment of Appendicitis," by Robt. T. Morris, July 15; "Appendicitis," by A. J. Ochsner, and "Appendiceal Pus," by John B. Deaver, July 22; "The Processus Vermiformis," by G. G. Eitel, July 29.

responded to that challenge; not one took it up. I am perfectly well aware that several of the best surgeons can show less than 2 per cent. mortality. But, remember, we are debating here to-day not a rule for surgeons like Deaver, McBurney and Morris, but we are debating this question from the point of view of a general rule for the general practitioner—and do you mean to tell me that the doctor at a country cross-roads, in a village, the man who does a surgical operation, once, twice, it may possibly be ten times a year, who, in many cases is not familiar with modern methods of cleansing the hands, of cleansing the skin, of taking the antiseptic precautions known to you and me, is to follow a general rule that we are to lay down for such a practitioner that he is to operate indiscriminately, and then state that he will not have a mortality of 2 per cent! I protest against it! It is not true! I believe in operation. I believe the rule should be operation, but the rule is proved by many an exception, and that which is a rule for the city surgeon who is operating every day is not the rule for the country surgeon who operates only once in a while.

THE CHAIRMAN—I ask Dr. Murphy of Chicago down to the stand.

DR. J. B. MURPHY, Chicago—It is very difficult to decide just what to say on this collossal subject in six minutes. From Dr. Keen's last statement—if I interpret him properly—I understand that he believes the cases should be operated on if they were in competent hands. Is that correct?

DR. KEEN—Certainly.

DR. MURPHY—Do you believe that *all* cases should be operated on in competent hands?

DR. KEEN—No.

DR. MURPHY—Do you believe all cases in the first twenty-four hours—if seen in twenty-four hours and if a competent surgeon is at hand—should be operated on?

DR. KEEN—With exceptions, yes; not all.

DR. MURPHY—May I ask the exceptions?

DR. KEEN—Certainly. There is an immense difference in the gravity of the cases. A severe case seen in the first twenty-four hours, in the hands of any reasonably competent surgeon, should undoubtedly be operated on at once. A mild case is a very different thing, and many of these should not be operated on in the first twenty-four hours, and sometimes not at all.

DR. MURPHY—Another question. What is a mild case in the first twenty-four hours?

DR. BEVAN—I object to the cross-questioning of the witness. I object to this method of conducting questions.

CHAIRMAN—The Doctor is in order.

DR. MURPHY— If anyone has a better spirit or a better feeling for Dr. Keen's great surgical skill than I have, I would like to see him. I love him for the work he has done. I am up here for the sole purpose of trying to arrive at some conclusion, at some line of action, at some position whereby all other great surgeons of America can say: "There is a line, and we will try and follow it"—something to guide us in this darkness, something to prevent the death and devastation that every year comes on from appendicitis—that is why I ask Dr. Keen these questions. I think you feel that (indicating Dr. Keen).

DR. KEEN—Certainly, and I quite agree with Dr. Murphy that this is a serious matter, that all want to arrive at the truth. I am just as anxious as Dr. Murphy and I quite reciprocate his kind expressions of feeling toward me, as to his own work in appendicitis. Will you kindly repeat the question?

DR. MURPHY—The question was: "What would you call a mild case in the first day of appendicitis? What would be considered a mild case?"

DR. KEEN—I have seen, and do not doubt that every one in this room has seen, cases in which even the diagnosis was itself doubtful, in which there was slight tenderness, little or no fever; it may be even by the end of the first twenty-four hours that these symptoms are subsiding, and I submit that in every such case it is not proper in all cases to operate in the first twenty-four hours.

DR. MURPHY—Thank you. With that as a basis for discussion, I can say that I might safely agree with Dr. Keen. But, gentlemen, how rarely do we find these very mild cases that remain mild cases for another twenty-four hours? No, sir. Who is the man who can say: "I feel from the course that this case is taking in the first twenty-four hours, that in the next twenty-four hours it is going to take a similar favorable course?" No one. The more frequently I operate, the more confident I am that I cannot tell from the symptoms what the course of a case of appendicitis is going to be for twenty-four hours. As I am unable to tell this, I feel it is my duty to do what? What I feel I can do in the first twenty-four hours—remove from that patient, with comparatively little danger, his appendix, which may become a source of great danger to him within forty-eight hours from the onset of the symptoms. It is my practice, and I am becoming more firm in it every day, and I am urging it more forcibly on the doctors who kindly transfer their surgical cases to me, that their cases should be operated on within the first twenty-four hours and that all of them should be operated on within the first forty-eight hours. A case was referred to me by Dr. ———— of Chicago; I was called early in the night. In the morning it would be twenty-four hours. In the morning the patient's temperature was normal and the pulse was, as I recollect it, 86. That patient appeared in a very nice condition for recovery. I said: "This case should be operated on." What did I find? A completely gangrenous appendix, black as rubber, distended and filled with necrotic debris.

THE CHAIRMAN—I wish to say that the discussion took a rather unusual turn and I think the position the Doctor took was entirely proper. The only reason I had for having it in this way was that I do not believe that Dr. Murphy would do anything that would be out of the way, and I have known Dr. Keen for a great many years, and he is abundantly able to take care of himself. Dr. Keen will now come on the platform and have his say.

DR. KEEN—Inasmuch as I have been catechised, it is only fair that I should have a word. Now, I believe that if Dr. Murphy and I were alongside of each other at one hundred cases, we should come to just about the same conclusions. I think he would be, perhaps, a little less radical than he talks, and I would be a little more radical than I talk. I have heard my friend Deaver, for instance, and you have heard him, talk very radically, but when he gets at the bedside, as I know of him in Philadelphia, he does not always do exactly as he says. It is very difficult to lay down a rule for a case of appendicitis. It is impossible. There are certain acute attacks in which you cannot operate too quickly. There are other cases so mild that Dr. Murphy would hesitate or refuse, I am sure. There are also intermediate cases, and, therefore, though I answered categorically in the cross-examination which my able lawyer friend put me through in the beginning, "Yes," "No," the answers were not quite precisely true. There are modifying circumstances in every case. There are modifying circumstances that will lead the most radical man to hesitate, and others that will lead the most conservative instantly to push ahead.

THE CHAIRMAN—Gentlemen, the discussion is now open for you.

DR. LEWIS, Kansas City—If I should not hear another paper read, I feel amply repaid for the time and travel from my home to Columbus. This is the class of cases which, surprising as it may seem, we meet every week, and to know just what to do, when to do it and how to do it are indeed the questions. During the last three or four weeks I have seen three cases, so interesting and so much to the point that it brings me back to the proposition of: Should I or should I not? The conjuring of conditions which have developed in the right inguinal region during the last fifteen years has been marvelous. During the last few days or weeks I operated upon a case of appendicitis and what did I find? I found a large gall-stone as big as the end of my thumb in a patient of 64 years of age—nothing but a mild attack of appendicitis. In the practice of an intelligent and experienced physician, I was called some six weeks ago, two-hundred miles in the Indian Territory in consultation with several of our best surgeons to see a patient. The trouble was in the same region, and on an exploratory incision we found the ileum passed through the omentum, eighteen inches in length, where the rupture of the omentum had occurred, and it was strangulated; only thirty-six hours had elasped since the symptoms; there were twenty-five necrotic points in the bowels which were perforated. The extensive inflammation and softening precluded the removal of this amount of bowel, and of course we lost this chance. This occurred in a stenographer.

When Dr. Keen made his statement of 2 per cent. mortality, I asked him the question: What is the mortality from the present method of his standpoint of treating the disease of appendicitis. We all know that it is more than 2 per cent. in the hands of the best men. Dr. Harsha, in his excellent paper, stated the most danger, and what I believe to be the most dangerous cases—the most illustrative argument—that many cases recovered without operation. That is an argument absolutely unanswerable. We are to blame for that argument. I remember saying on that occasion something that I cannot more forcibly say now; when the time comes that we can calculate our pathologic symptoms and determine in the begin-

ning that this case is going to be a dangerous or a mild one, the time has come for limiting our views and treating every case in a conservative way by the new—the eclectic—method. That time has not come; we must treat those cases from what we know; the mortality is great, but very slight if the cases are operated on. I believe that very soon cases, regardless of their character, operated on in the first twenty-four hours will show an infinitely less mortality than we have to-day. At the Denver meeting I remember Dr. Keen's challenging anybody who said that he could get a less mortality than 2 per cent. in a hundred consecutive cases. My natural modesty permitted me to rise at that time and state that I had at that time one hundred and eighteen cases of consecutive operations of appendicitis in the interval, without a death. Since that time the number has risen to one hundred and thirty-seven; that, however, does not prove. I believe that there are mild cases in which the judgment, observation and careful watching of the surgeon will permit him to carry the case through without an operation, and then he can operate, if he desires to protect his patient from future attacks. Many a time I have been called by competent physicians to operate, and have refused. I have been called in three consecutive cases, and yet I refused to operate and these cases recovered. As near as we can glean from statistics, between 85 and 90 per cent. recover, if they are operated on; but we do not know which case is a dangerous one and which is not a dangerous one.

DR. JOHNSON, Hartford—When I came in this afternoon and looked over the program and saw that there were eight articles on appendicitis, I came to the conclusion that the surgeons had gotten at an attack of literary appendicitis, from which, I think, there will be about 100 per cent. of recoveries. As my name was referred to this afternoon, I wish to state, that at the meeting of the AMERICAN MEDICAL ASSOCIATION at Atlanta, I reported one hundred consecutive cases of appendicitis, with two deaths. I want further to state that in all my operations up to date, in which I have operated before the suppurative process had commenced, I have not lost a single case, and those in that class now number a great many more than a single hundred.

DR. WAGNER, Chicago—I do not want to speak of my own favorable results, but I would like to say a few words with regard to the severity or non-severity of the attack in the beginning of appendicitis. In one case, a boy, seen one afternoon, had a temperature of 99, fever, pain in abdomen; normal next morning, temperature 102 with fever that very same day; he was operated on at 9 p. m. with perforation of the appendix and pus. The boy got well. Another case was that of a boy, who had pain in the abdomen, which passed off in a few moments; I saw the boy at noon; the mother told me that he had had pains before; I operated at 10 o'clock at night. I found a perforated appendix with foul-smelling pus. The boy walked up to the operating-table. I doubted whether I should operate on him. In the case of a girl of 17 years, who fell on the floor in the morning, the doctor came in the afternoon; she was suffering with a pain; the next day I saw her with the doctor; at 3 p. m. operated on her. There was pus, with a great big lump of omentum and a stone beneath the kidney; the stone had existed for a long time. In regard to the further question of how to decide whether to operate or not, you never know what the condition is until you operate on the case. I want to say a few words in regard to dealing with pus cases. I do not think that the operation is concluded after you have emptied the abscess. I believe you have in every case to resort to finding the appendix. I do not believe that appendectomy is completed when you have removed the appendix and discharge of pus. In a number of cases that I have shown to the hospital my method has been to break up all the adhesions and have the intestines freed from each other.

DR. D. W. GRAHAM, Chicago.—I was glad to hear the discussion and all the papers. I believe that the most experienced surgeons disregard all rules of other surgeons in the presence of individual cases of appendicitis. That is the conclusion I have arrived at. It is my method, and when in the presence of a case, I do not want anybody else's rules and experience—I want my own. I believe that every surgeon here is governed by his own experience. There is something in the face of the patient, something in the pulse, the general aspect of the case, that helps the surgeon to decide, regardless of any rule that can be put into practice. Dr. Keen, I think, struck the keynote to the whole situation when he said that some cases are so mild that Dr. Murphy would refuse to operate, and other cases can not be operated on too soon. Speeches are easily made and words are universally washed off in a meeting. I want to say, without being personal, that Dr. Murphy sometimes does not operate; he says, "I think that case is better without operation." Is that not so, Dr. Murphy?

DR. MURPHY—What was the condition? I will ask the Doctor to name the case.

DR. GRAHAM—It was a case of appendicitis, which, in my judgment, should have been operated on. Everything was ready; Dr. Murphy was called in consultation; he said, "No." I acquiesced. I had to.

DR. MURPHY—I recall the case and the consultation—except the particulars of the patients sometimes—and I think I agreed with the doctor's diagnosis.

DR. GRAHAM—That is right.

DR. MURPHY—And I think this was four or five years ago, and I think that was the position I took at the time, but I am happy to say that I have changed!

DR. GRAHAM—This was three years ago. I heard Dr. Murphy preach the same way.

DR. PLACE, Philadelphia—It is true that our first object must be to save life and we should be conservative. We must remember this: as long as the abdominal wall remains opaque and not transparent, we cannot see what goes on, and we should lean toward operation, except the case be very clear. I think with that we can have something to think about.

DR. PORTER—I wish to go on record as opposed to the statement that no case of purulent appendicitis gets well. I wish to go on record as believing truly that there are cases of general purulent affection of the peritoneum that, with timely opening and drainage, coupled with incision, relieving the tympany and letting out the intestinal contents will get well, and I believe such cases are on record, and the burden of proof rests upon the man who denies the proposition.

DR. OCHSNER, Chicago—I have nothing to say in closing, as regards my own paper, but I wish to take just one moment to speak on a part of another's paper—the very matter just spoken about. Now, I have seen a great many cases of general peritonitis. There was a time when I operated on these cases, and at that time whenever the cases proved to be general peritonitis the patient died. I have assisted in a considerable number of these operations and whenever they were operated upon the patient died. Others have succeeded in saving some of those patients, I am aware, according to the literature. I have not been so fortunate, but for the last four years I have followed another form of treatment in these cases in which general peritonitis was present, in which the condition was present that in former times I concluded to be general peritonitis, and cases in which precisely the same symptoms were present, and cases which were formerly proven to be general peritonitis. I have followed this form of treatment: I have entirely stopped the feeding of the patient; washed out the stomach to stop the vomiting; feeding the patient entirely by enema, and I have saved many of these patients. Now, I can prove that these cases had general peritonitis, because I have seen them later on for the relief of adhesions and from general adhesions; consequently I can prove that these patients had general peritonitis. I have the history of these cases.

DR. JOHN B. DEAVER, Philadelphia—I believe the cases of general purulent peritonitis believed to be cured by operators are in the majority of instances, circumscribed peritonitis and localized abscess. In early years I operated upon cases like those under discussion, but with universally fatal results. I have seen cases of what I believed to be general peritonitis recover without operation. It is my practice to treat these cases by packing the abdomen with ice, rectal alimentation absolutely, fly blister over the epigastrium and hypodermic of strychnia. I do not for one instant think it possible to clean every nook and corner of the peritoneal cavity, therefore I do not believe that operation in the presence of universal inflammation of the peritoneum from infectious pus will accomplish a cure.

In answer to Dr. Keen, who states that Dr. Deaver does not always operate when called to the bedside of a patient, I beg to state that he is quite correct. In many instances where I refuse to operate, had I been called early enough I would. I am still of the opinion that better results will follow the removal of the appendix immediately after the initial appendiceal pain than at any other time.

Until the good Lord makes the belly walls transparent it will be impossible to do other than guess as to the progress the appendiceal inflammation is making. In the greater majority of instances the diagnosis of appendicitis is not a difficult one to make. There are cases of appendicitis, as of all other forms of disease, where the diagnosis is not only difficult but at times impossible to make.

On general principles I do not approve of breaking up adhesions between coils of bowel in the presence of infection and searching for the appendix. As to the removal of the appendix in cases of appendiceal abscess, I would go on record as advis-

ing against the procedure, the operator not being an expert in this line of work. With all due respect, I believe there are few of the many men operating for appendicitis who are capable of dealing successfully with the different cases. I know of no operation which is more difficult than some of the appendiceal cases. In the majority of instances the appendix can be taken out with safety by the expert, but not by the occasional operator or the general doctor, who operates but seldom. If time permitted I should like to refer to the varieties of abscess met with in appendicitis.

DR. MEANS, Columbus—The matter has been discussed so thoroughly and carefully that I feel it would be unwise to take your time further in discussing the points at issue. I think that there has been a general agreement upon the point I made in my paper that there should be no time-limit. My position was that I recognized no time-limit in operating upon appendicitis; that when the diagnosis was made I operated, provided that the environments of the patient were such that I could, and I believe that point has been considered.

THE DEATH-DEALING LONG-TUBE NURSING-BOTTLE.*

BY ERNEST WENDE, M.D.,

BUFFALO.

It is not my intention to enter into a controversy on infantile mortality from diarrheal diseases, its deplorable rate, and the causes which are responsible for it. These latter have been carefully studied, and are, briefly: bad air, summer heat, ignorance of simple hygiene, and especially artificial feeding.

To the correction of all these possible factors have been directed the efforts of municipal authorities, the medical profession, societies, philanthropists and others. Tenement-house construction has been corrected and regulated by ordinance, the evils of the heated term mitigated by fresh-air missions, free ice and the like, maternal ignorance enlightened by educational circulars, and finally, sanitary protection has been given to milk from dairy to nursery, as has been extended to no other industry, and this largely, if not almost entirely, with the interest of infantile feeding in mind.

With regard to diet, the child should live on food provided for it—milk—the only food which contains all the principles essential to life and growth. The infant structures grow by selecting with unerring accuracy, from the blood, the materials akin to their own composition. For the first six months the child should draw his supplies exclusively from the maternal fountains. When, however, the full and finely-chiselled bust of napkins or towels, the mammary gland of the mother of today, is insufficient for the performance of its functions, we must have recourse to lacteal glands less esthetic and beautiful—those of the cow, goat, or ass—in preference to the wonderful feeding stuffs now so largely advertised in the daily and the medical journals. "An honest farmer who pastures his own cows on a healthy farm is the man to be employed to furnish milk to the poor little baby who has to seek another dairy than his mother's. And if the milk is not sweet, fresh, and pure, pathologic changes will be developed, thereby rendering the gastro-intestinal tract more susceptible to irritants, and the production of cholera infantum results—when the baby gets beyond hygiene and enters the domain of medicine.

While all these causes of diarrheal disease in infancy have, as stated, been carefully studied and their influence minimized, and while also the so-called long-tube nursing-bottle has been condemned, the extent of its evil possibilities, from its intrinsic construction, has been in part elaborated.

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It is almost needless to state that an infant previously enjoying an environment of continual warmth and moisture, entirely devoid of infection, that was aseptically and insensibly nourished by osmosis should not have a hose several inches in length, remarkably efficacious for the propagation and the passage of pathogenic micro-organisms, placed in direct communication with its very susceptible, excitable and over-sensitive stomach. Facility of access is the only recommendation attaching to such a plan, but this is altogether outweighed by the terrible risk necessarily involved. Decidedly its only use and adaptability to lessen the danger of infection is its employment for the flushing of the lower bowel of the child.

The object of this paper is to briefly give the perilous and untrustworthy features of the so-called long-tube nursing-bottle, and to show justification for not only interdicting it, but doing so by law. Something definite should be aimed at and done to protect and save the helpless offspring of the ignorant and indifferent. The myriads of little ones it has already slaughtered should be sufficient to inspire us to enact elaborate laws, to be administered with the greatest care and strictness, in order to prevent parents and those in charge of infants from committing a variety of acts inconsistent with duty, judgment and common sense—for there is more virtue in the power of law than in circulars of instruction or education.

The chain of protection sought to be placed against these most prolific sources of cholera infantum is no stronger than its weakest link, and this weak link has been the apparently innocent but death-dealing long-tube nursing-bottle. No factor has been more deadly, none so subtle as this device. Conceived in the interest of labor and time saving, appealing to the poor and overworked housewife, it has invaded the home under false pretense as has no other appliance, but has left in its trail a record of mortality. Its dangerous possibilities, now well known, have caused the physician to taboo it for some time, yet its convenience has been so great, and its innocence so reasonable, that its apparent merits have, in only too many instances, been considered above the warnings against it. So certain is its malignant bearing on the artificially fed infant that its manufacture, sale and use should be prohibited by law, and, recognizing this fact, it has been so interdicted by the Buffalo Department of Health.

The peculiar features of danger from its employment may be summarily stated, that owing to its construction and material, and to the use to which it is put, probably no better incubator of pernicious micro-organisms and their toxins could be easily designed, as none have proven so successful. To the details, which render this statement plausible, your attention is asked, as well as to the experimental work which has been done in absolutely demonstrating, step by step, the vicious results created by the utilization of this contrivance, and how and why it is vicious; why it should, in all communities, be condemned and prohibited. Its popularity and foothold have been so strong that it also has had a commercial significance, and its abolition in Buffalo has not been without remonstrance and even the cloud of possible litigation. With the elimination of this, the greatest source of artificial infant-food contamination in the household, with a judicious observance of sanitary care of milk in homes, as supplementary to official surveillance of possible and preventable causes, it is not visionary to expect a reduction in death-rates in proportion as efforts based on our present knowledge can be made effective.

As milk is an almost universal food for bacteria, its reception in a rubber tube, acquired from a coagulum that is normally cavernous and unstable, invariably presenting surfaces that are rugose and unpolished, rendering asepsis an impossibility, must necessarily augment the conditions favorable for the growth and development of micro-organisms, and finally convert it into a nursery which produces conditions favorable to cholera infantum.

To establish, beyond peradventure, the danger of these tubular thoroughfares for the introduction of pathogenic microbes into the infantile economy, and the justification of suppressing them by legislation, I, as a health official, resorted to a series of investigations, microscopically, bacteriologically and chemically. The microscopic examinations of transverse sections, cut from unemployed rubber tubes taken from nursing-bottles procured at the various drug stores of our city, revealed the fact that they were manufactured out of rubber sheeting cemented together at their longitudinal margins to complete the tubes, and the seams thus formed were found unfailingly imperfect in their construction, showing, throughout their entire length, elongated pits and sinuses, which, in their functions, can only be likened to our modern bacteriologic "breed ovens." In some instances, this state of affairs was further intensified in that the tubes were constructed of more than one layer, between which such enormous spaces were frequently developed, directly connected with the lumen of the tube by the numerous pits and sinuses referred to, as to more or less involve their entire circumference. Moreover, the sections likewise demonstrate that the material used in the manufacture of this tubing is exceedingly porous, and that the pores vary amazingly in size and shape. Again, pockets were often seen communicating with the inner surface of the tube, while, in several specimens, distinct channels were visible connecting similar pits or pockets with cavities in the substances of the rubber. It would, indeed, be difficult to imagine a more efficient arrangement for the propagation of germs.

By reflected light, under the microscope, the inner surfaces exhibit a view apparently made up of roughened and scraggy elevations and depressions with many openings and clefts, extending deeply into the texture. All the features of the imperfect seams, by this means, are easily discernible and can be readily traced and studied throughout their entire length. Therefore, it is obvious that any foreign material, gaining entrance to this perilous combination of pits, sinuses and porosities, cannot be removed by any of the ordinary methods of cleansing, however vigilant and faithful be the mother or nurse. Yes, it is extremely doubtful whether bacteria, when once lodged in these incubators, can be displaced or even destroyed by any known germicide or chemical.

From the bacteriologic examination of an infected rubber tubing, we were able to recognize a deposit of decomposing material coating the inner surface, being the thickest in those portions of the lumen in close proximity to the nipple and glass tubing. This debris was found, on further investigation, to consist of coagulated casein, with innumerable bacteria of varied morphology. The qualitative bacterial examination of the material demonstrated the bacillus acidi lactici to be the predominating organism. The staphylococcus pyogenes aureus and ouidium albicans, with three other distinct species, two of which belonged to the non-chromogenic bacilli, the third being a chromogenic micrococcus, were present, and in addition several species not yet completely isolated.

Five decigrams of this grumous conglomeration, dissolved in 2 c.c. of sterile water and injected intraperitoneally into each of three full-grown guinea-pigs, weighing respectively 200, 254 and 261 grams, produced death of the animals in from forty-eight to sixty-one hours.

Segments of the infected rubber tubing were placed in small vials, and kept in an incubator at a temperature of 98.5 F., for twenty-one days, after the lapse of which time the specimens thus prepared were either in part softened or completely disintegrated, while, on the other hand, like pieces of the infected tubing, soaked for a few moments in a 5 per cent. solution of carbolic acid and subjected to the same temperature, were not similarly affected. The inference drawn from this experiment verifies the fact that the prolonged effect of decomposed milk on rubber will mash, mangle and disintegrate it.

In further unraveling the chain of morbid sequences, it was found, on a chemical analysis and investigation, that this process of decomposition and divulsion was due to the fermentation of the lactose of milk remaining in the tube.

An intimate part of the tubular mass consisted of zinc oxid as a filling which, in the cheaper grades, was considerable in amount. This component substance, under the influence of the bacillus acidi lactici, and probably some other bacteria, supplied one of the conditions favorable for the continuous production of lactic acid, while the other condition was the presence of stale milk in the lumen of the tube. At the ordinary temperature, these micro-organisms decompose the lactose, giving an interchange of elements as follows:

$$C_{12}H_{22}O_{11}+H_2O=C_3H_6O_3.$$

However, a certain degree of acidity puts a stop to the growth of the bacteria and to the production of acid, but if the acid is neutralized, as formed by zinc oxid, as in this case, the decomposition is a continuous one. The casein was also more or less decomposed, which gave rise to bad-smelling products that remained in solution or else passed off in the form of gases. The presence of the zinc lactate, thus formed, which was soft and hygroscopic, coupled with the other soluble casein products, rendered the rubber doughy, indicating further injury dependent on micro-organisms.

In conclusion, I must insist that there are most rational grounds for believing that this mechanical invention, the long-tube nursing bottle, should be considered as a premeditated plan for the poisoning and killing of infants, demanding special treatment by law.

DISCUSSION.

DR. F. P. NORBURY, Jacksonville, Ill.—The ordinary nipple is open to many of the objections which are applicable to the long tube. In the average nipple that is molded, after being used for some time there will be a crease running the whole length of the nipple—on a line at which the two halves are united. This is to be seen by turning the nipple wrong side out. This becomes an excellent nidus for bacteria. I have seen, in consultation, several cases of poisoning resulting directly from the use of such nipples.

DR. A. C. COTTON, Chicago—I would like to ask Dr. Wende whether he has made any microscopic examinations of the nipples as well as of the tubes.

DR. ERNEST WENDE—The nipples are subject to the same objections as the tubes. However, they can be inverted and thus, are more easily cleansed. It is customary to recommend that two nipples be employed, same to be kept in a solution of bicarbonate of soda, and used alternately. It may be too early to speak concerning the wisdom of this ordinance, yet the death-rate in the city of Buffalo was diminished just one-half, as compared with the year previous to the enactment of the said ordinance. Our statistics are based on the number of those who died from cholera infantum, for they demonstrate that the majority of deaths occurred among those who use the long feeding-tube.

SUMMER DIARRHEA OF INFANTS.

ITS ETIOLOGY AND TREATMENT.

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While the summer diarrheas of infants vary much in their clinical manifestation and in the pathologic lesions, they are all similar in their etiology and treatment. It is, therefore, to these phases of the subject that I wish to direct attention.

ETIOLOGY.

The etiologic factors are predisposing and exciting, the former are age, environment, season, character and method of feeding, and previous condition of health. Nearly all cases occur during the first two years of life. During this period the child has feeble resisting power; its digestive organs are readily prone to functional disturbances. Its nervous system has feeble inhibitory power, and the irritation that in the adult would have no effect, in the infant produces profound impressions.

The influence of environment is particularly noted in large cities where, owing to the lack of fresh air and sunshine there is induced a feebleness of constitution that increases the susceptibility of the child to morbific influences.

The method of feeding and the quality of the food is a nearly constant predisposing cause. Statistics show that about 97 per cent. of all cases occur in bottle-fed babies.

The predisposing element is undoubtedly the quality of the food, in most cases lacking in elements to symmetrically nourish the child, and, by producing an enfeebled condition, make it more vulnerable to the exciting cause. Rickets is a conspicuous example.

Again, the food may be difficult of digestion, as when it contains an excess of albuminoids. In these cases, the digestive organs are taxed beyond their capacity and a state of chronic irritation produced. It can be safely affirmed that the majority of cases of summer diarrhea are preceded by some form of indigestion due to the method of feeding. The season is so important that these diseases were formerly looked upon as thermic fevers. We now know that they are not directly induced by heat.

Modern bacteriology has taught us the true influence of heat in inducing these disease. We should not, however, lose sight of the fact that extreme heat is debilitating, that its enervating influence lessens the resisting power, that the profuse perspiration creates a thirst which leads the child to ingest excessive quantities of food, overloading the digestive organs, and impairing their functional activity. The previous condition of the health of a child is perhaps more important in influencing our prognosis than in causing summer diarrhea.

The child whose constitution is enfeebled by sickness, either acute or chronic, is not only more susceptible to these diseases, but is less able to withstand the invasion. All the conditions I have mentioned exert, either singly or together, an influence in predisposing the child to summer diarrhea but none or all together, in the true sense of the term, cause these conditions.

Summer diarrhea is an infectious disease, just as certainly and upon the same evidence as typhoid fever, with the distinction, however, that it is not due to one specific germ. The method of invasion is nearly always by the food through the gastro-intestinal tract. The poison originates in the milk, through the agency of bacterial growth.

I quote from Professor Vaughan of Ann Arbor[1]:

"The child taking its nourishment directly from the breast of the healthy mother obtains its milk practically germ-free, while the one taking cow's milk receives along with this food many kinds of bacteria, some of which are very harmful. These diseases are confined to the summer months because the germs which elaborate poisons in milk require a relatively high temperature for their growth. During the hot months of summer these bacteria are widely distributed, and easily find their way into milk. They grow rapidly and produce chemical poisons. Furthermore, decomposing matter harbors and supports these bacteria at a time when the outdoor temperature is high enough to allow their growth."

The intestinal tract of healthy children contains bacteria. The two varieties constantly found are bacillus lactis aerogenes, and bacillus coli communis. As to the part played by these bacteria in normal digestion, but little is positively known.

In all forms of diarrhea these obligatory milk-feces bacteria are greatly increased in number, and are more widely distributed throughout the alimentary tract.

According to Booker's investigation, in mild types of summer diarrhea these varieties predominate almost to the exclusion of all others. Owing to their increased number they develop acids in the intestinal tract—lactic, acetic and butyric. These acids irritate the mucous membrane and are probably the direct cause of the diarrhea. More important, however, is the fact that by reason of the irritation of the mucous membrane from the increased number of these bacteria, it is made more vulnerable to the influence of virulent pathogenic germs. In the more serious types of diarrhea, however, other bacteria are present, among the most common being the proteus vulgaris.

In many of these serious cases, as post-mortem examinations demonstrate, the actual damage is the result of bacterial growth, since no lesion of the intestinal wall is discovered and no penetration of the body tissues by bacteria can be demonstrated. In this class of cases the symptoms are certainly to be attributed to the absorption of toxins. In cases where the micrococci are present there are usually found distinct inflammatory changes in the intestinal mucous membrane. It is most generally the staphylococci that are found. These bacteria may find an entrance into the subjacent tissues, and thence may be distributed throughout the body. When these cases do not terminate fatally in the acute stage, they are likely to drag along for weeks and even months. "It is the consensus of opinion among investigators that no one specific kind but many different kinds of bacteria are concerned in the causation of summer diarrhea."[2] Indeed, as many as forty different varieties have been detected.

A further important fact is this: chemical poisons, the result of bacterial growth, may be developed in the milk before it is taken into the stomach and these poisons may induce very serious symptoms in a short time after the milk is ingested. Professor Vaughan reports a case where symptoms of cholera infantum developed within two hours after taking the milk.

There is certainly good reason for believing that true cholera infantum is caused by toxins developed outside the body. It is important to remember that the stomach of the infant has feebler digesting power than that of the adult; that the albuminoids of milk are but slightly changed in the stomach, but pass into the bowel almost

[1] Edwards' Supplement to Keating's Cyclopedia, p. 15.

[2] Keating's Cyclopedia, Vol. iii, p. 190. Intestinal Bacteria in Children—Booker.

unaltered, hence, poisons in the milk are not likely to be destroyed or inhibited by the gastric ferments.

TREATMENT.

The first and most important principle of treatment is to stop milk and all other kinds of food. This direction should be made mandatory, because people, in mistaken kindness, will insist upon giving the child some nourishment. The reasons for this are that milk affords a pabulum for development and growth of bacteria, and therefore tends directly to increase and continue the difficulty. Furthermore, digestion is greatly impaired and the child receives little nourishment from the food. The next object is to unload the intestinal tract as completely as possible. This is done to remove the supply of poison, lessen the absorption of toxins, and prevent irritation of the mucous membrane by the contact of decomposing material. The means to this end are mechanical and medicinal.

The mechanical means are lavage of the stomach and irrigation of the bowels. In those cases where there is marked gastric irritation, lavage is an excellent mode of treatment, not only because it empties the stomach, but for the reason that it prevents vomiting. While some writers say this is entirely free from danger, yet if a serious result had ever occurred such a statement is incorrect. One fatal case has been reported from introducing the catheter into the larynx. To avoid this accident, the index finger should be used as a tongue depressor, when the catheter can be carried over the base of the tongue, and against the posterior wall of the pharynx, and thence on down the esophagus. In this way all danger can be avoided.

Irrigation of the bowels reaches directly only the large intestine, and in order to accomplish this purpose, it is necessary that large quantities of water be used, at least from half a gallon to a gallon. As the object is to flush out the colon the operation is to be continued until the water returns free from fecal matter. While irrigation is going on the abdomen should be gently rubbed. This stimulates peristaltic action of the entire intestinal tract, and favors elimination.

To unload the small intestine, drugs are necessary. Calomel is the best remedy, given in doses of from 1-10 to ½ grain, repeated hourly until the typical spinach discharges are produced. In many cases this may be followed to advantage with castor-oil. In a majority of cases seen early, this treatment will arrest the disease.

When the disease is so arrested the next important point is in regard to the diet, because it should be remembered that these cases may easily suffer a relapse from renewed infection. It is often better to withhold milk for some days and use other varieties of food.

It is in this connection that certain proprietary articles are of service. Among these articles I would mention bovinine, Fairchild's panopepton, and liquid peptonoids. Mutton broth is an excellent article of diet, and may be the sole food for several days. It should be carefully prepared and all fat removed. In children over a year of age farinaceous infusion may be employed. The following, taken from Jacobi[3], answers a good purpose: 5 oz. barley water, the white of one egg, from one to two teaspoonfuls of brandy or whisky, some salt and sugar. Small quantities of this may be given every few minutes.

When a milk diet is resumed, it should be thoroughly sterilized and properly diluted. In infants under a year of age, I prefer the milk and cream mixture. The formula which I usually employ is as follows:

℞. Cream ..... ʒiii
Milk ..... ʒii
Sugar of milk ..... ʒi
Water ..... ʒx
Mix and sterilize.

To each three or four ounces of this, when ready for feeding, one to two drams of lime water should be added. In preparing this the sugar should be dissolved in water and the cream and milk added.

This formula can easily be modified to suit individual cases. Cases that do not yield to the treatment already indicated, and this includes those that have persisted for a few days before medical advice is sought, require further attention.

Where the alvine discharges continue fetid, remedies directed to the disinfection of the alimentary tract are indicated. A remedy that has given me the best satisfaction is eudoxin. This may be given in doses of from ⅛ to ½ gr., in powder, combined with sugar of milk.

Where the discharges are acid in character, as indicated by the erythema about the buttocks, this remedy may be combined with an alkali, as subnitrate of bismuth or prepared chalk. In these cases also the bowels may be irrigated twice each day with a warm saline solution. Where there is much tympanites, it is of benefit to add to the water bicarbonate of soda one dram to the pint.

Where the diarrhea persists the question of the use of astringents suggests itself. My own belief is that it is better to use some remedy to check the action of the bowels, because frequent movements interfere with the rest and comfort of the patient. I have never been able to see any benefit from the vegetable astringents, even in those cases where they are retained by the stomach. Of the preparations of opium I prefer either paregoric or Dover's powders. These allay irritation, arrest peristalsis, and give needed rest. A safe rule is to direct that the prescribed dose be given after each movement, thus as they become less frequent, less of the drug is given.

Where there is marked prostration, supportive measures are indicated. Alcoholic stimulants, externally and internally, are to be employed. Children bear stimulants well. Whisky is the better, as it is less likely to be adulterated than wines or brandies. For external use, equal parts of alcohol and hot water are better than alcohol alone. Where the heart is evidently weak, digitalis is an excellent remedy. I prefer the fluid extract, owing to the smallness of the dose, of which one drop may be given every two or three hours in water.

There are a certain number of cases that persist in spite of treatment. This class includes those cases where there is a true inflammatory lesion in the bowel, with a general sepsis. The discharges consist largely of mucus, epithelium, and blood. The treatment already indicated is appropriate to these cases, but often unavailing. Small doses of silver nitrate are sometimes of benefit. Sulphocarbolate of zinc is another remedy worthy of trial.

Whatever the reason may be, the fact remains that change of location is the most valuable treatment possible. I remember a case that I treated with indifferent success for five weeks and then suggested a change. The mother took the child to Spirit Lake, Iowa, and in one week, without any other general change in treatment, the child was restored to health. In another case seen by me in consultation a year ago, the disease had persisted for four weeks. The child was extremely emaciated and anorexia was complete. This patient was sent to Wyoming, where it made a complete recovery.

[3] Therapeutics of Infancy and Childhood, p. 225.

CHOLERA INFANTUM.

A few thoughts upon the subject of the treatment of the acute form of this disease. After irrigation of the bowel it is of benefit to use the following: 20 gr. of tannic acid dissolved in one pint of boiled water. This is injected into the bowel and retained by pressure against the buttocks. The acid probably coagulates any albuminoids that may remain in the bowel, and prevents their absorption. This treatment, which was suggested by Professor Vaughan, I have frequently employed, with decided benefit.

As the watery discharges rapidly produce collapse, it is good treatment to arrest the action of the bowels, after they have been irrigated. For this purpose I employ the method suggested by Holt, namely, the hypodermatic injection of morphin sulphate, gr. 1-100, with atropia sulphate, gr. 1-800. This will frequently arrest the action of the bowel for some hours, but should not be repeated within twelve hours.

Thirst is usually intense, but the stomach is so irritable that fluids are generally rejected. All kinds of foods should be strictly withheld. The most agreeable drink is ice-cold sterilized water containing one drop of dilute nitric acid to each half ounce.

For collapse there is nothing equal to the subcutaneous infusion of normal salt solution. The only apparatus necessary is a hypodermic needle and fountain syringe. This supplies the system with water in a manner so that it can not be rejected. When the extremities are cold the hot sheet pack is indicated. Mustard may be added to the water in which the sheet is dipped, with advantage.

Nervous symptoms are probably due to either fever, the absorption of toxins, or both, and when prominent, generally indicate a fatal termination. The ice-cap to the head can safely be employed. A solution of bromid of potassium and chloral hydrate may be given per rectum.

Coal tar drugs are seldom to be employed.

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SURGICAL TREATMENT OF ACUTE PERITONITIS.*

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In presenting my paper on the surgical treatment of acute peritonitis I have not thought it necessary to review my experimental work, or to report all my cases operated upon. Neither is it possible in a short paper to enter into a discussion of the anatomy, etiology, pathology and the various clinical phases found in this formidable disease, because inflammation of this membrane may have so many different causes and assume such varied clinical aspects that it is difficult to formulate a uniform and satisfactory classification. Suffice it to say that, anatomically and physiologically considered, the peritoneal cavity may be said to be a large lymph-sac, and noted for its capacity of absorption. This capacity is not surprising when we take into consideration that in its parietal and visceral enfoldings, it presents nearly as large a surface as the entire integumentary covering of the body.

Idiopathic peritonitis is considered doubtful by most modern pathologists, and it has become an established practice to search for a local cause in all cases of peritonitis. I believe in every instance, micro-organisms from some source or other have gained access to the peritoneal cavity. Wounds of the peritoneum heal with remarkable rapidity if the surfaces are kept in uninterrupted contact; in a few hours, adhesion takes place between the united parts by means of plastic material and is termed "plastic peritonitis." This is purely a regenerative process and should not be classed with the inflammatory affections.

Of the various structures of the body, the peritoneum, without question, is one of the most susceptible to septic influences, and it has become an established fact that different portions of the peritoneum present different degrees of vulnerability to sepsis. The most sensitive region is that over the small intestines. The parietal peritoneum is much less susceptible to infection. When peritonitis is developed away from the small intestinal area, it is apt to be localized. This is shown by the course of peritonitis in the iliac fossa, in the subphrenic region and in the pelvis.

Septic and suppurative peritonitis are, etiologically, identical; however, clinically they differ in that acute septic peritonitis is generally diffuse and leads to a rapidly fatal termination, while both forms are caused by a pus organism. Suppurative peritonitis is more generally local or circumscribed and more often amenable to surgical treatment. It is quite likely that the most common form of peritonitis is that caused by infection from some portion of the alimentary canal, as in appendicitis or acute obstructions and the various forms of ulceration of the bowels. The organism generally found in these cases is the bacillus coli communis. Still there are certain other infections which pursue quite as fulminating a course as those from the alimentary tract, such as for instance results from faulty technic, in which a virulent germ is introduced by instruments, sponges or fingers. We also know that the reproductive organs are often the cause of a virulent peritonitis, as in certain forms of metritis or salpingitis. It may be well also to mention here certain forms of inflammation of the liver and gall-bladder and the rupture of abscesses of various parts of the body as producing peritonitis. The micro-organism usually found in these cases is the streptococcus. In rare instances, perhaps, some of the milder pus cocci seem to have an unusual virulence. I believe, barring faulty asepsis, that peritonitis caused by infection from the intestine is the most rapid in its progress and the most fatal in its results. Whether the colon bacillus in its growth is an effect rather than a cause, I am unable to say. Its constant presence in all cases of peritonitis of intestinal origin justifies the opinion that it has at least a great influence as a causative factor. The symptoms of acute peritonitis when operative interference is advisable and not without hope may be grouped as follows:

1. Pain of varying degree; either local and becoming general, or general becoming local, according to cause. This pain is very frequently referred to the region of the umbilicus, even when the seat of infection is remote from that point.

2. Tenderness, general becoming local, or local becoming general, as a result of pain. Marked rigidity of the abdominal muscles is present, and in many instances this rigidity is more marked over the portion of the peritoneal cavity in which the infection commenced. The importance of early rigidity is a symptom of the utmost value, and my experience leads me to fear that its aid in

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making an early diagnosis is not sufficiently recognized by many practicians.

3. Vomiting, usually of a green ropy substance. It may be exceptionally absent, but when present is a symptom of a rapidly developing and severe infection.

4. Shock, varying in degree, is usually present in cases of acute perforation or gangrene, before paralysis of the intestine from septic absorption has occurred.

5. From two to twelve hours after infection the abdomen becomes more or less distended, this distension not only being due to a transudation of fluids but also to the accumulation of gases within the intestinal canal as a result of paralysis and arrest of the normal functions of the intestinal tract. To wait for distension in the diagnosis of general peritonitis, is in the larger proportion of cases, to postpone operation until too late. A rise in pulse and temperature is exceptionally absent. More frequently the pulse runs from 100 to 160, is thready and weak, the temperature varying from 99 to 105 or even higher within twelve hours of the first symptoms of invasion. Peristalsis is diminished.

The symptoms in fully developed peritonitis in which the wisdom of an operation is questionable, I have grouped as follows: Pain, lessened or absent. Tenderness general. Distension marked, replacing the rigidity. Incessant vomiting of green or stercoraceous material, obstinate constipation, peristaltic movements not heard, a rapid and feeble pulse, temperature may be high or low, more or less lividity of the abdominal skin; the extremities cold and the mind clear, and the body bathed in perspiration; one step more and our patient is moribund.

The treatment of peritonitis resolves itself into both medical and surgical, and while it is the purpose of this paper to treat the subject from a surgical standpoint yet a few words in reference to what the surgeon should do and what he should not do in the way of medical treatment is pertinent to my subject. The diet should consist of concentrated liquid nourishment, such as milk and the animal broths, with stimulants as indicated. When nausea and vomiting interfere with the stomach feeding, which is so frequently the case, high rectal enemata may be tried, and if this fails submammary infusion of warm water or the physiologic saline solution will frequently relieve the intense thirst which is at times so distressing.

The therapeutic indications in acute general peritonitis have not up to this time been fully settled. While opium and cathartics have been used largely in the treatment of this formidable disease, yet both fail to accomplish the desired result. The advantage claimed for the use of opium is the relief from pain and the state of rest it gives the inflamed intestinal surfaces. This theory, however, is an erroneous one. The fact is the chief danger in this disease is dependent not upon the local inflammation but upon the absorption of the products. The method of intestinal drainage, first devised by Lawson Tait, has found a general acceptance throughout the world. The free and early use of saline cathartics not only carries out these products through the intestinal canal but relieves distension, promotes absorption of the peritoneal exudates and assists in eliminating the toxins. On the other hand the use of opium not only increases intestinal distension by the impairment of its muscular wall but also hinders the absorption of exudates and the elimination of the various toxins. To condemn the use of opium in perforation peritonitis would be folly. Cathartics in this class of cases are positively contraindicated, as an extravasation of liquid feces would likely be increased in such a case and an infection which had, up to that point, been local, might become general. Opium in these cases not only prevents peristalsis, but relieves pain and diminishes shock.

In general peritonitis, especially the septic variety, strychnin, camphor and alcoholic stimulants should be employed early and at short intervals. Should the stomach refuse to tolerate the above mentioned drugs they should be given hypodermically or per rectum. Calomel in small doses in the early stages sometimes diminishes the nausea and vomiting.

In discussing the surgical treatment of general peritonitis is it not good logic to assume that septic inflammation of the peritoneal sac is amenable to the same general laws that govern septic infection of other tissues? The indications for interference are much more difficult to determine than methods. While, perhaps, most cases of general peritoneal infection prove fatal, yet many cases are recorded where free incision and thorough irrigation and drainage have been followed by recovery. In a classical address by N. Senn, before the International Medical Congress at Moscow, in August, 1897, he says: "I have opened, drained and washed out the peritoneal cavity in many cases of diffuse septic peritonitis and I am free to confess, without a single successful result. Yet there can be no difference of opinion in reference to the advisability of early operative treatment in the management of general diffuse septic peritonitis. Without operation death is certain." Koerte[8] believes that most of the brilliant statistics of cure of acute general peritonitis by operations are false. Frederick Trevis[3] says there can be no doubt that all forms of peritonitis are septic and due to micro-organisms, and that there is no such thing as idiopathic peritonitis, and we have made great advances in the treatment of localized peritonitis but we have made but little progress in the treatment of diffuse peritonitis. Halstead of Johns Hopkins regards general peritonitis an exceptionally fatal disease. Mikulicz reports 3 recoveries in 14 cases, Koerte 6 recoveries in 19 cases. E. H. Grandin[4], in a discussion on septic peritonitis, says that his studies have enabled him to be more hopeful in the prognosis of general suppurative peritonitis than was formerly the case. He gives a record of 40 cases of local and general suppurative peritonitis. These cases do not include instances when pus was low in the pelvic cavity and accessible by the vaginal route. Thirty-one of these cases were local suppurative peritonitis and a general suppurative peritonitis. Of the 31 cases, all recovered after incision and drainage. Out of the 9 cases of general suppurative peritonitis only one recovered. In this case multiple incisions were made, and copious flushings were practiced with saline solution, drainage was through the incisions by means of strips of gauze, and antistreptococcus serum was injected a number of times at stated intervals. After the administration of the serum the temperature invariably fell, the pulse-rate became less, and the production of pus was greatly limited. Dr. Grandin is not certain that the serum brought about a cure in this case, but thinks it quite probable and advises its use in all cases.

A paper by Robert Abbe, upon "The Prognosis and Treatment of Acute General Peritonitis," says that the grave form of acute general peritonitis is almost invariably due to the rupture of a hollow viscus—stomach, intestine, appendix or bladder. Its origin is certainly bacterial, and septic infection overwhelms the patient and is unconfined by any barrier of lymph. The virulence

of the attack varies with the nature of the material introduced. Material from the appendix is more virulent than material from the stomach and bladder. In grave cases a long median incision or two lateral ones are required. He believes that gauze packing is far better for drainage than glass tubes or rubber; that in widespread infection systematic irrigation with normal saline solution must be used, and if the intestines are distended with gas and fluid to prick them in one or two places with a knife and allow the escape of gas and feces and wash away with a stream of hot water. Through one of these openings introduce a syringeful of saturated solution of epsom salts and close the puncture.

I am fully satisfied from personal observations that a fatal issue in many of these infectious cases is due to prolonged medication, and the surgical remedy is consequently postponed until its chances of success are gone. If the abdominal cavity could be opened at the very beginning of general infection the results would be much more encouraging than they are at the present time. To sustain that which we have asserted, let us take for instance perforation of the abdominal wall with injury of its internal viscera, sudden intestinal extravasations, twists, invagination, strangulation or rupture abscess. While it is true that with some of these lesions a general infection is coincident, and in others it may appear in a few days, yet in both classes an early operation is necessary to be successful. In all acute abdominal lesions of an obscure character we are justified in making an exploratory incision.

It is not within the scope of this paper to go into all the minute details as to the locality and size of the incision or the different methods of drainage and irrigation. Suffice it to say that the incision should be made in the median line below the umbilicus, unless the primary lesion should indicate otherwise.

For simple evacuation of fluids and drainage a short incision is usually all that is required, but when the condition depends upon mechanical obstruction or paresis of the intestine, and irrigation of the peritoneal cavity is to be used, an incision at least long enough to admit the free introduction of the hand is indispensable.

Perfect drainage of the peritoneal cavity in all cases is practically impossible and especially so when the intestines are greatly distended. The material generally used is either gauze, rubber or glass. I prefer gauze wicks or glass tubes filled with strips of gauze and wrapped with the same material. Many times, in order to make drainage as perfect as possible, it is necessary to insert gauze or drainage-tube in other than the primary incision, as in one or both loins or through the lumbar region. The Mikulicz tampon or drain, first used by the one whose name it bears, has proved of inestimable value in many cases of abdominal operations.

Irrigation, like many other surgical procedures, has been freely argued pro and con. The objection that irrigation only spreads the infection holds good only in localized peritonitis where there might be danger of breaking or tearing up the adhesions. Practically it is impossible to thoroughly disinfect the peritoneal cavity, yet it is far better to have imperfect disinfection than none. Solutions of various kinds are used; those containing strong antiseptic or germicidal properties are conducive to more harm than good. Sterilized water, boric acid, Theirsch solution, acetate of aluminum and normal saline solutions may be used without fear of toxic effect. Personally I prefer the physiologic saline solution with 1-2000 or 1-3000 formalin. Whichever one of these solutions one prefers should be used at a temperature of at least 105 to 115 F., as in all cases where irrigation is deemed advisable, a solution of this temperature stimulates the heart and thereby assists in relieving shock. The stream should be sufficiently large, with force enough to reach the remote parts of the peritoneal cavity. I prefer using the Kelley irrigation tube introduced into the bottom of the peritoneal cavity. The propriety of breaking up adhesions for the purpose of making irrigation more perfect is questionable, and I believe should not be done except in non-suppurative cases. The method of mopping fluids or pus from the peritoneal cavity by gauze or sea sponges is not to be advised. It is far better to turn the patient upon the side and allow the fluid to run out, after which a more thorough cleansing can be done by gauze. Death in peritonitis is more frequently caused by rapid intoxication than by inflammation. In all cases of fulminating peritonitis, inflammation of the visceral peritoneum of the intestine leads to paralysis of the muscular coat and rapid distension. To relieve this, surgical intervention has of late been advised by N. Senn, McCosh, Knowsly, Thornton, and many others, by incision or puncture of the intestine. The methods of Senn and McCosh seem to be the most practical. Senn places his patient upon the side, brings the most distended part of the intestine well forward into the wound and then makes a transverse incision of about an inch opposite the mesenteric attachment, then grasps the bowel as far as possible above and below the incision, elevates the intestine on either side of the incision in its wall and in this wise empties out its contents, after which he thoroughly cleanses the exposed intestinal surface with normal saline solution. The incision is closed with the usual Lembert sutures and the bowel returned.

McCosh[5] claims that his results have been much better since he began the use of saturated solution of magnesium sulphate as an intra-intestinal injection. His method is to inject one or two ounces of sulphate of magnesia through a hollow needle attached to a large aspirating syringe; the small intestine is punctured as high up as possible and the wound closed by a Lembert suture.

While my experience in the surgical treatment of acute peritonitis has been limited, compared with that of many other surgeons, yet the results have been such that I feel justified in asserting that in the early stages of acute peritonitis we are not only justified in making an exploratory incision, but it is our imperative duty. I hold that every case showing most or all of the symptoms I have enumerated should be subjected to an operation at once or as soon as the patient has been prepared. I make but one exception to this rule and that is, in cases of gonorrheal infection of the tube we are justified in waiting in most cases until the acute symptoms subside. I have yet to see a death that was caused by a too early operation, while I have seen many where medication was prolonged until the surgical remedy was of no avail; and the sooner the general practician is brought to a realization of the fact that acute peritonitis is a disease that must be treated surgically, the sooner will the mortality in this disease be decreased. My method has been to irrigate freely the peritoneal cavity with from two to four gallons of normal saline solution, after which I irrigate with one or two gallons of saline solution, containing from 1-2000 to 1-3000 formalin in all cases where no pus or seropurulent fluid is found. I use no drainage, but fill the peritoneal cavity with plain physiologic saline solution and close the wound. Drainage is always attended by danger of pu-

trefaction bacilli entering into the peritoneal cavity, and, to be of service, must be limited to the evacuation of pre-formed pathologic spaces. I have no cause to regret its abandonment in non-suppurative cases. If there has been no bowel movement for several hours and evidence of intestinal paresis exists, I inject from one to two pints of normal saline solution into the intestine by means of a hollow needle attached to a glass irrigating jar and close the intestinal wound by means of a Lembert suture. In cases of localized suppurative peritonitis, after evacuation of the pus I mop out the cavity with gauze dipped in normal saline solution containing 1-1500 formalin, and drain with gauze wicks.

The after-treatment in all cases of peritonitis which have been subjected to an operation demands close attention, for all such patients are prostrated, not alone from the immediate effects of an operation, but from the disease as well, and require stimulating treatment. Strychnia, camphor and alcoholic stimulants are to be used. Dry heat externally aids us in relieving shock and in restoring peripheral circulation. Partial inversion of the body by raising the foot of the bed acts as a cardiac stimulant; thirst must be relieved when vomiting and nausea are severe, by high rectal enemata or subcutaneous infusion; tympanitis can often be relieved by the use of the rectal tube or high turpentine enemata.

PERFORATION PERITONITIS.

CASE 1.—F. G., a male, age 43 years, by occupation a laborer, was found by a park policeman in Gordon Park Sunday evening, July 26. An ambulance was called, and he was sent to St. Clair Street Hospital. The history as given me by the house physician previous to his coming under my charge is as follows: The patient says he has not been feeling well for several days. During Sunday he was taken with diarrhea and vomiting, with severe pain in the abdomen and lower limbs. On entering the hospital he was given a hypodermic injection of ¼ grain of morphia every four hours, which gave him some relief from pain, and vomiting was less frequent. The patient says his bowels moved several times during Sunday evening and Monday. Tuesday at 2 p. m. the house physician observed that the patient was in more pain and that there was stercoraceous matter in the material vomited. No bowel movement had occurred during the day. I was at this time asked to see the case. I found on inspection a pinched look, anxious expression, flat abdomen and a restless patient. On palpation I found extreme rigidity of all the abdominal muscles; in fact, they were hard and board-like; tenderness was general, yet on firm pressure there seemed to be one point at the outer border of the left rectus muscle, one inch below the umbilicus, which was apparently more sensitive than any other part of the abdomen. The pulse was 126 and the temperature 99. A hypodermic injection of $^1/_{30}$ grain of strychnin was given and the patient prepared for an abdominal section. An incision was made midway between the umbilicus and pubis; a retractor was used to raise the abdominal wall for an intra-abdominal inspection before disturbing the internal viscera; to the left of the incision a coil of collapsed bowel some five inches in length was seen. The peritoneal cavity was walled off with iodoform gauze, the collapsed bowel brought out of the incision and laid on a sterilized towel wet in saline solution; intestinal clamps were applied, five inches of bowel were removed, and the Murphy button used. After the button was introduced into the bowel, before being closed, twelve ounces of saline soluton, the bowels thoroughly cleansed and wiped with gauze wet in saline solution and returned to the peritoneal cavity. No drainage was used in this case, yet my patient made a rapid and complete recovery.

CASE 2.—Miss S., aged 22 years, by occupation a clerk, gave a history as follows: Three weeks previous she was sick and her attending physician said she had an attack of appendicitis—which I believe was so. After recovering from her illness she says at times she still had some pain. On Tuesday morning, Sept. 8, 1898, she arose as usual. After being up a couple of hours she was taken with violent pain in the abdomen, and vomiting began shortly thereafter. Dr. Pasko was called, who diagnosed peritonitis undoubtedly due to appendicitis. At 10 p. m. of the same day I saw her in consultation. The abdomen was distended, there was general tenderness, rigidity well marked, vomiting, frequently of a green ropy substance. Pulse was 120, temperature 102.5. Peristalsis was diminished. My advice was an immediate operation. This the parents did not accede to but wished to wait and see what they could accomplish by local applications during the night. Early the following morning the Doctor telephoned me that the patient was much worse and that they had decided to remove her at once to St. Clair Hospital for an operation. Before leaving home her temperature was 103, pulse 130, the abdomen greatly distended, tenderness general and extreme rigidity of all the abdominal muscles; vomiting quite frequent. After due preparation an incision was made in the right linea semilunaris. A slight amount of odorless serum was found in the peritoneal cavity. The small intestines were thoroughly covered by and agglutinated with plastic material. These adhesions were thoroughly broken up, and whenever practicable, the lymph was removed and washed away. The appendix was removed. It contained a large fecal concretion 1½ inches from its distal end which was necrotic and broken down. The peritoneal cavity was thoroughly irrigated with some four gallons of normal saline solution; after this thorough irrigation. The cavity was filled with the same solution and the wound closed. No drainage was used. My patient made an uninterrupted recovery.

BIBLIOGRAPHY.

1. Journal of the American Medical Association.
2. Archiv of Klin. Chir.
3. Frederick Trevis: British Medical Journal, October, 1896.
4. Medical Record, April, 1897.
5. Medical News, May 29, 1897.

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DISCUSSION.

DR. A. J. OCHSNER, Chicago—Dr. House has brought before us one of the most important subjects that we will have under consideration during this meeting, and this paper should certainly receive a very full discussion, because the very radical views which the Doctor has expressed should either be endorsed by this Section as good teaching, or, if our experience does not correspond with that of the author, this fact should be emphasized.

Having under my care a large surgical hospital, I have had an opportunity to observe an unusually large number of patients suffering from peritonitis, especially those in whom this condition is due to perforative or grangrenous appendicitis, and others in whom it is due to infection from salpingitis. Patients are constantly being sent in with the request of the attending physician that an abdominal section be made at once, because this seems to be the only possible chance of saving the patient's life. Until about four years ago I usually complied with this request, and almost invariably the patient died. At that time I thought these patients died notwithstanding the operation, now I know that many of them died on account of the operation.

Usually the infectious material is primarily localized, either in the appendix or in the Fallopian tubes, and this material is distributed to the other portions of the peritoneal cavity by the motion of the small intestines. If this motion is prevented in the early part of the attack the peritonitis will remain very

limited and correspondingly harmless. The omentum naturally surrounds any infected intra-abdominal area, and the small intestines apply themselves against the omentum, but as soon as food is taken into the stomach, the peristaltic motion of the small intestines, which is always sure to occur at once, disturbs this condition and distributes any septic material with which parts of these organs may have come in contact.

On this physiologic fact is based the treatment which I now employ in these cases. These patients are given absolutely no food by mouth, not even a small amount of milk or gruel, because my experience has taught me that it requires but a very small amount of any kind of food to kill these patients. If food is given it will simply decompose and increase the amount of septic material in the intestines; it will form gas which will distend the intestines, and favor the passage of the colon bacillus through the intestinal walls. But aside from this, the fact that it will give rise to peristalsis is alone enough to condemn the giving of food by mouth in these cases. If there is stercoraceous vomiting I wash out the stomach, and if no further food is given this will usually permanently stop the vomiting. The patient receives from three to five ounces of predigested food by enema every three hours.

Many of the patients come into the hospital with the abdomen enormously distended, a pulse ranging from 120 to 160 per minute, and a temperature ranging from 101 to 104.5 F., presenting precisely the same clinical picture that many others had shown who almost invariably died after a laparotomy of last resort, and still a very large proportion of these patients recover. I have frequently opened the abdomen in these patients later, and found gangrenous or perforated appendices, or extensive adhesions following a ruptured pyosalpinx, proving the correctness of the original diagnosis.

I believe that if this form of treatment were employed systematically whenever any form of peritonitis, not due to traumatic causes, first makes its appearance, general peritonitis would almost never occur, and I am certain that this treatment will save many patients, who would almost certainly die were they subjected to an operation under the impression that this is their only chance.

DR. J. B. MURPHY, Chicago—To begin with "I do not know where I am at" on this subject! I would like to ask Dr. Ochsner whether he means by allowing the contents of the bowel to escape to allow it to move on?

DR. OCHSNER—As long as the patients vomit I wash out the stomach. Then they get rectal feeding, three to five ounces of the liquid food, of some kind, every three hours, and absolutely no nourishment by mouth.

DR. MURPHY—That is not the question. But you said it prevented the contents of the bowel moving—being disturbed. Do you mean passing along in the canal, or what?

DR. OCHSNER—If you stop feeding them the small intestines will not churn around the septic material with which they come in contact, and no more food decomposes in the intestines because none is placed there. The decomposition products, and especially the colon bacilli, find a chance to get through the intestinal wall if food is given, because of the gaseous distension of the intestine, which does not occur if food is absolutely prohibited.

DR. MURPHY—The important factors in peritonitis are: The diagnosis. When does a patient get a peritonitis? When does he get a general peritonitis or a local peritonitis that is extending along and going to become a general peritonitis? What is the significance of the term "collapse" in connection with general peritonitis? Should we operate on a patient in collapse in general peritonitis? Do I understand Dr. Ochsner that he means this class of patients, patients that are collapsed, having the cold and clammy skin and gulping of that biliary material, if I may use the term, every ten or fifteen minutes? Is this the class of cases you stop feeding?

DR. OCHSNER—Some patients of that particular class will still get well if we stop the feeding; formerly they all died.

DR. MURPHY—The important matter in connection with general peritonitis, as I look on it, is the type of infection. What is the character of the infection? What is the course of the type of that infection after the peritoneal surface has been inoculated?—I will use that word. We know from experience and opening of the peritoneal cavity, when that contains a large quantity of pus, that cases, with a large quantity of pus, get well. We know from experience that cases with a small quantity of pus, opened and drained, will die; also that when we see a peritoneal cavity where the peritoneum is not blistered, where the peritoneum retains its gloss, regardless of the quantity of pus, patients in a large percentage of cases recover. We again know from experience, when we open the peritoneal cavity, regardless of the quantity of pus, that patients with blistered peritoneums—that is, where the intestine has lost its gloss—will die. We must go back to the type of infection. I believe from cultures that we have made from these cases that the blister cases are of the streptococcus type. I believe, again, that a large quantity of pus cases are some other kind, but I leave out of consideration what the etiology is. I speak of the pathologic condition when you open the peritoneal cavity. If the peritoneum is blistered, I do not recall a single case that has not died. Where the peritoneum has not been blistered, many, many of them have recovered. Then, there is a middle class that you can not save. The infection has existed for four or five days. And it seems to me somewhat a matter of where the infection comes from. I am much more afraid of infection from the lower portion of the bowel than the other, and that sustains Dr. Ochsner's position, with a gastro-perforating abscess extending down to the peritoneal cavity, having an accumulation of pus in the pelvis from a perforating ulcer of the stomach, and I report a case where the patient had been seen but thirty-six hours and the pelvic cavity filled with pus. I washed him out with salt solution and closed him up without drainage. I believed he would get well, and he did get well.

In the diagnosis the length of time the pus is retained in the peritoneum is a very important thing. A surface covered with these endothelial cells—and these have the same functions as the epithelial cells—a material that destroys the endothelial cells and blisters the bowel, opens the lymphatics for absorption. I believe the surface of the peritoneum absorbs little more than the surface of the skin. As soon as the endothelial cells are disturbed, then absorption commences, and that is why I draw the line on appearance of cases. I believe all cases of general peritonitis should be treated in the early stage. I believe diagnosis should be made on pain, tenderness, nausea, vomiting, temperature and distension—and this is not an early symptom; it is the last of symptoms; it may not be present. You should not wait for collapse or shock. The collapse is practically the fatal condition. I do not recall a single case of collapse, of cold perspiration, that has recovered from an operation or recovered without—they have all died. I have a number of times recently refused to operate. If I would operate I would make a large opening and clean out the peritoneal cavity thoroughly with gauze or fluid.

DR. THOS. H. MANLEY, NEW YORK—What does he mean by blistering of the abdomen? He says every patient with a blister dies—those with the severe form of peritonitis with blisters die. What does he mean by that?

DR. MURPHY—I thought I made myself plain. Where the peritoneum is blistered, the endothelial cells remove from the infection of the peritoneum.

DR. OCHSNER—If this treatment is followed in the early cases there are no late cases, and, on the other hand, the conditions in which formerly I have found the blistered peritoneum and in which the patients died—the same clinical conditions—the patients get well now.

DR. JOS. H. BRANHAM, Baltimore—This discussion has brought out a most remarkable condition of things. The idea of general peritonitis is one of infection, generally one after injury of some kind, either perforation or gunshot injury, or something of that nature, and I can hardly understand—although we know washing out the stomach and lower intestine can do something—how we can listen to teaching that keeping the patient quiet, and without food, will cure a case of peritonitis with a half dozen gunshot wounds, through the intestine. Maybe Dr. Ochsner means some other kind of peritonitis. If it is perforation of intestine and you have infection from colon or other bacilli, we are going backward. I should say that this teaching is a long step backward, because I believe with the writer of the paper, that the best treatment of general peritonitis is operative treatment with thorough cleansing of the bowels and peritoneal cavity, added to the method recommended of thoroughly cleansing the alimentary canal above and below. A certain number of cases, especially those in which there is a good deal of fluid in the peritoneal cavity, will get well after this treatment; but in a general infectious peritonitis with a lot of pus in the peritoneal cavity, if it has made any progress, or unless the infection is caused by a mild germ—such as the pneumococcus—the patient will surely die if left without some surgical interference. On the other hand, if the alimentary canal is thoroughly cleaned from above and below—the bowels cleaned off after operation—a small percentage will be saved, and I think that small percentage with improvement in the method of cleansing will gradually be increased. I think it would be just as reasonable to leave a patient—after washing out his stomach and alimentary canal—quiet if he had a perforating appendicitis, as it would be if he had a general infectious or suppurative peritonitis, and I think that because a few have died after operation we should

not go backward to some old method—the only improvement over which is the keeping of the alimentary canal as empty and clean as possible.

DR. FLOYD W. MCRAE, Atlanta, Ga.—It seems to me that, if my ideas of pathology are correct, Dr. Ochsner is wrong. The condition he described is secondary to the primary infection. This new infection that is added to the original infection due to paresis of the bowel, is the result of fermentation and putrefaction in the alimentary canal. The general peritoneum is in danger here from two sources: the primary disease, and the infectious material within the thin-walled intestines of lowered vitality. The diagnosis in these cases is of the utmost importance, because it frequently enables the surgeon to remove the primary cause of the peritonitis. By early operation, the infection can be removed before the condition described by Dr. Ochsner obtains. That is the way it impresses me. I have recently collected statistics of 601 cases of septic peritonitis, subjected to surgical intervention, with a mortality of 52.41 per cent. I believe these results are better than can be obtained by medical treatment. Dr. Van Arsdale recently reported ten cases of general septic peritonitis with six recoveries and four deaths. Surgeons operating early in this condition are the ones getting good results. In the late cases, where there is enormous distension, surgery does little good; but in these extreme conditions, I think the treatment which Dr. Ochsner recommends is the proper treatment. I have seen three cases of beginning general peritonitis get well under operative interference. By general peritonitis, we now understand that condition where the infection is not limited by adhesions, where there is nothing to prevent an extension—we rarely see a case where the entire peritoneum is inflamed. I have seen three cases get well where there was that dirty-dish-water fluid loose in the peritoneal cavity, and the whole membrane seemingly involved, due to gangrenous appendices. I do not believe they would have gotten well under Dr. Ochsner's plan of treatment.

DR. M. F. PORTER, Fort Wayne, Ind.—I wish first to emphasize what Dr. Murphy says regarding the importance of realizing the nature of the infection that is at the bottom of peritonitis. I believe that if you have a streptococcus invasion of the peritoneum, you do not have to have infection extending over a great surface of the peritoneum in order for that patient to die, no matter what you do. On the other hand, I wish to say that I have looked over as much of the peritoneal surface as it is possible to look over from opening six inches in the middle line and have seen a perfect, if you please, complete bath of all the surface in pus, and I have seen these persons get well. I do not know of any means of telling whether you have to deal with streptococcus or infection of some other sort prior to the operation. When the opening is made I believe you can. I have seen the intestines look as if they had been dipped in boiling water; I believe these patients will die. Dr. McRae has just spoken of a condition in which he says all patients die—a great distension of the bowel—and this seems to me an important point. I believe in these cases of great distension of the bowel, that the opening of the gut is of almost as much importance as is the opening of the peritoneal cavity itself for the purpose of drainage. It is true that most of these people die, but I have seen them so far distended that they could scarcely breathe—cyanotic—and yet I have seen such patients get well with opening the gut, doing just as little as you can do to get rid of your septic material for the time being and finishing the operation by and by. It is good theory and good practice; it is a nice idea to get rid of the cause of the trouble, but you can not always do this at the first operation; some of these patients are dying, not from appendicitis or peritonitis, but from the results—tympany has a great deal to do with it. Patients will be relieved if you open the gut. So I believe that the first thing to do is to stop the absorption, relieve the tympany, etc., by a quickly performed operation, simply a laparotomy, cutting a hole in the intestines, leaving it lie on the outside, letting the gas escape, and finishing the operation when the patient is stronger. Most of them will die, but you will not kill any one of them. I admire Dr. Ochsner's bravery in saying: "I have killed them." He did not save them. That is so, and most of us are in the same boat; but now and then you have one that does get well and then you know that you have saved a life.

DR. BROWN, Illinois—As a representative of the country doctor who is a listener probably more than anything else, I want to say that this discussion puts me in mind, like every other surgical treatment in treating a disease, of a story. Our magnificent surgical friends, Dr. Ochsner and Dr. Murphy, are, apparently, getting on two sides of the question, when, in reality, they are not. The story of which I am reminded is of the student who was questioned by the professor as to what he would do in the treatment of a certain difficulty—he would do this and that, and the other thing. "If you didn't succeed, then, what would you do?" He said to the professor, "I would send for you!" The country doctor can not send for Dr. Ochsner and Dr. Murphy. I should be compelled to send for both of them, because they have two kinds of treatment. This treatment of a case of peritonitis is the treatment of an individual case. When Dr. Ochsner goes to the bedside of a patient, he will treat that individual case as he finds it, not as you discuss it here before these gentlemen present. Dr. Murphy will do exactly the same thing, and I am very much afraid that if they were both at the bedside, they would come pretty near getting the same idea when they saw the individual case. I know the treatment of Dr. Ochsner,—depriving the patient of all nourishment—is a good one, but whether it will do all that he says I am willing to wait and see.

DR. MOORE, Indianapolis—I came in late, but I trust the author of the paper laid stress on the fact that peritonitis is a secondary affair; it is always secondary. There is no one thing more remarkable in the history of medicine and surgery than the fact that for centuries men of high and low degree have been making post mortems and finding cases of peritonitis without having recognized that fact which we all now recognize—that peritonitis is a secondary affair. It is always secondary to an appendicitis, to a salpingitis, to a cholecystitis, to a perforation, or to some surgical lesion. Therefore, if we get our patient early and have the evidence of general peritonitis, the mere fact that there is a general peritonitis should not direct us away from our surgery. We should treat those cases surgically. When a patient comes in with a last gasp, our medical friends very kindly turn him over to us. Then I am inclined to think that our friend, Dr. Ochsner, has a very level head. I think it behooves us to do nothing in those extreme circumstances. If I may judge from my own personal experience we will accomplish nothing but to bring surgery into disrepute; I mean in these cases coming it at the last minute. I have never seen surgery do good there, but at an early date why should we treat a patient with inflammation of the abdomen differently from a patient with inflammation in any other part of his anatomy?

DR. A. F. HOUSE, Cleveland—I want to say that while, of course, I had to cut my paper somewhat short, it is not likely that you would treat peritonitis surgically without some medical preparation. In my paper will be found what I believe to be proper preparatory treatment, as well as before, during and after an operation. I believe that the alimentary tract should be emptied, if it is possible. If you cannot do so by salines by the mouth or by fluids injected, or salines into the rectum, then we should empty the alimentary tract, not opening the abdominal cavity. I think I made mention of the fact that while no bowel movement had occurred for some time, I did not fool with a patient, and that, while there were evidences of paresis, I used a large needle—aspirating needle—for the purpose of emptying the bowel of liquid feces and gas and then injected from one to two pints of normal saline solution. I have done that with the very best results. As to peritonitis being a secondary condition to something else, I think I made mention of that. Another thing is in what class of cases to operate or when to operate, and when not to operate. I think I laid as much stress on the different symptoms as it was possible. I think, as many others do, that each and every individual case must be governed by its condition when seen. I simply wanted to lay stress on the fact that I believe that all cases of peritonitis beginning with local tenderness becoming general, with rise of temperature and rapidity of pulse, should be operated on at once, and I think I can show that by statistics. I know that had I operated early I would have saved my patients. It is not four weeks since I showed a case, five days after being diagnosed as appendicitis. It was seen by a prominent surgeon of the city forty-eight hours before I saw it. He said wait for developments and let it localize itself. He did. The next day I saw the case. He said let it localize itself and develop. He did. I saw the case within twelve or twenty-four hours afterward. I then believed that the belly was filled with pus. It was a retrocecal abscess. I recollect another case of six weeks ago, where the gentleman was taken sick on Tuesday morning going to his place of business. He immediately returned home, and called in his family physician who diagnosed appendicitis. A surgeon was called in shortly afterward and he rather dilly-dallied and said, "Wait for developments." I saw the case on the same evening, or the evening of the same day. The tenderness was local in the morning; when I saw the case, tenderness was beginning to be general, pulse 120, temperature 103, tympanitis beginning to be marked and there was rigidity of the entire abdominal

muscles. My advice was immediate operation, not to wait until morning. My advice was not taken, because I could not promise to cure the patient. The patient was not operated upon. At the post-mortem what did we find? A belly full of pus. The man had a postcecal abscess ruptured. And what was the consequence? Death.

EPITHELIAL STRUCTURES IN THE PERIDENTAL MEMBRANE.*

BY FREDERICK B. NOYES, D.D.S.

CHICAGO.

For four or five years I have been interested in the histologic study of the peridental membrane, and during that time have devoted what time I could to the special study of certain structures found in that membrane, and called by Dr. Black, who first described them, the glands of the peridental membrane.

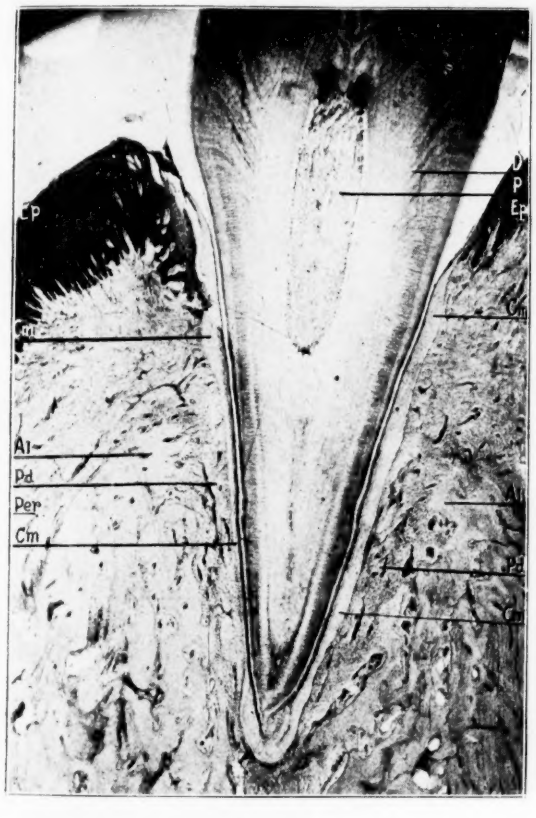
The work which I have tried to do on this subject is really not in shape to report, as it has not been worked out to the point where positive statements can be made in regard to the nature of these structures. But I have reached a point where to carry through the work would require from three to six months of time, without interruption. This it has been impossible for me to do, and I see no probability that I will be able to do it in the near future. I have, therefore, decided to make this simply a report of my work, and a statement of the problem as it stands. The histologic study of this tissue is beset with the greatest technical difficulties. Situated between calcified tissues, all specimens must go through the calcifying methods, and, moreover, the character of the tissue is such that it is difficult to avoid overhardening. I need not dwell on these technical difficulties. All who are familiar with such work will understand them. I mention them only as an apology for defects which may be noticed in the illustrations.

One man has said to me that he had never seen a specimen of tooth that would be considered technically acceptable in the study of the liver, for instance.

It is true that the technic of this study must be improved. It is almost impossible to get sections of the peridental membrane as thin as would be desirable for high power work; but, though they are harder to study, many things can be learned from thick sections; some things better than from thin ones, especially by comparison with low powers, and the use of the binocular. The difficulty of showing in photographic illustrations the things that are learned in this way is very great, however.

The diseases of the peridental membrane have attracted marked attention, and provoked an immense amount of writing and discussion. It has been a continual surprise to me to find so many of those who write most freely on this subject show so little interest in the histologic character of the tissue with which they have to deal. They usually dismiss it with a word. Last winter one man who has written much on this subject, told me that he had never had time to take up the study, and showed absolutely no interest in it; still, in a paper which I heard him read a few days before, he had indulged in arguments based on his ideas of histology of the tissue.

I am unable to understand how men can hope to arrive at a knowledge of the diseased conditions of a tissue, the normal conditions of which they do not know, and which contains structures which they do not recognize, and concerning the origin, function, or destiny of which



Longitudinal section of the tooth, and alveolar process showing the fibers of the peridental membrane, magnified 40 diameters—35 mm. Zeiss obj. Ep, epithelium lining the gingival space and continuous with the epithelium covering of the gum. D, dentine. P, pulp. Cm, cementum. Al, bone of the alveolar process. Pd, peridental membrane. Per, periosteum covering the outside of the alveolar process.

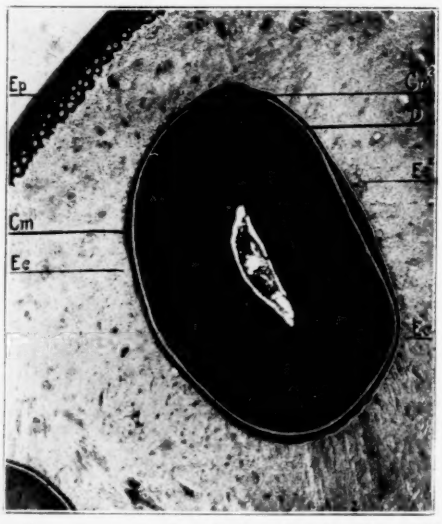
Transverse section of the tooth, peridental membrane and alveolar process. Magnified about 40 diameters—35 mm. Zeiss obj. M, muscle, Per, periosteum on the labial side of the process. Al, bone of the alveolar process. Pd, peridental membrane. P, pulp. D, dentine. Cm, cementum.

*Presented to the Section on Stomatology, at the Fiftieth Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.

they have no idea. It is impossible that anything satisfactory can be worked out in regard to these conditions, which are of so great interest to the dentist, until the problems are attacked in a more scientific and rational manner. Until then we are fighting we know not what, we know not how.

Transverse section through two teeth and the peridental membrane in the gingival portion. Magnified about 40 diameters—35 mm. Zeiss obj. Ep, epithelium covering the gum. D, dentine. Cm, cementum. Cm 2, cementum filling an absorption cavity in the dentine. Ec, epithelial structures. Ec. 2, portion shown in Fig. 19.

The peridental membrane (Figs. 1 and 3) may be defined as the tissue which fills the space between the root of the tooth and the bony wall of the alveolus, being attached to the cementum on the one side and the bone on the other; it surrounds and is attached to the root from the border of the alveolus, to the gingival line, and supports the epithelium of the gingivus. It has been called by a number of names, of which I prefer pericementum, or peridental membrane, the two being used synonymously. This membrane belongs to the class of fibrous membranes, being composed chiefly of white, fibrous con-



Cross section of a root of an incisor showing the epithelial structures. Magnified about 75 diameters, A. A. Zeiss obj. Cm, cementum. D, dentine. P, pulp. F, fibers of the membrane. Ec, epithelial structures.

nective tissue. It is not in any sense a double membrane, and, while it has qualities in common with the periosteum with which it blends at the rim of the alveolus, it differs markedly from the periosteum in any position.

For convenience of description I have followed Dr. Black's division of the membrane into three portions. The gingival portion surrounds the neck of the tooth from the border of the alveolar process to the gingival line, and supports the gingivus. The alveolar portion surrounds the root from the border of the process to the apex. The apical portions surround the apex of the root and fill the apical space.

In transverse sections of the membrane, which have been well stained with hematoxylin, and eosin, even with as low a power as a thirty-five (Figure 4) m.m. lens,

Tangential section of the peridental membrane. x75 A. A. Zeiss obj D, dentine. Cm, cementum. F, Fibrous tissue of the peridental membrane. Ec, epithelial structures, showing the net work.

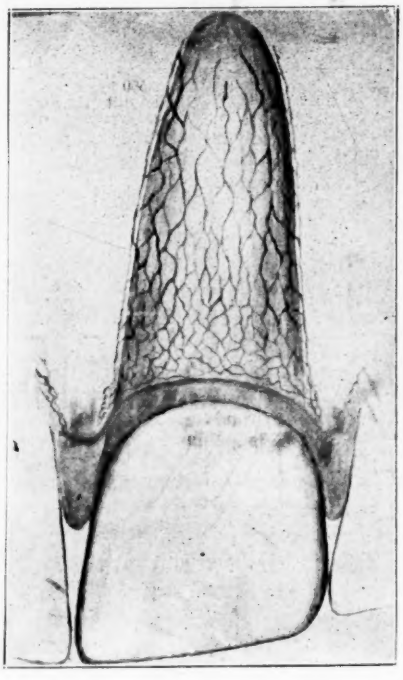
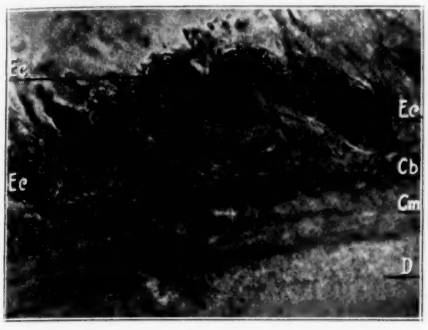


Diagram showing the arrangement of the structures around the root of a superior central incisor. (Dr. G. V. Black.)

small deeply-stained bodies can be seen lying close to the cementum, and winding between the fibers as they spring from it. With a one-half or three-fourths inch (Fig. 5)

objective and a binocular instrument, the winding of these cords of deeply-stained cells among the fibers is beautifully shown. In such observations these bodies very strongly suggest such structures as the sweat-glands. As many as 200 bits of these cords have been counted in a transverse section of the gingival portion of the membrane around an incisor of a young lamb.



Epithelial structures magnified about 550 diameters: 1 12 oil Zeiss obj. Ec, epithelial cords showing the cell forms and nuclei. Cb, cementoblasts. Cm, cementum. D, dentine.

In studying the arrangement of these cords they are found to form a network about the root of the tooth, extending from near the attachment of the epithelium at

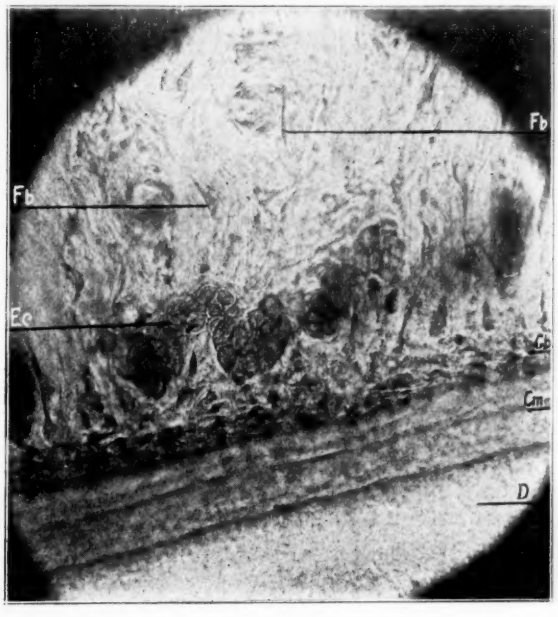
Epithelial structures magnified about 550 diameters; 1 12 oil Zeiss obj. Fb, fibroblast. Ec, epithelial cords cut through, showing the arrangement of the cells. Cb, cementoblasts. Cm, cementum. D, dentine.

the gingival line almost to the apex. In the gingival portion they form a close-mesh net, which grows more open as they pass apically. In sections cut tangentially

Epithelial structure magnified about 550 diameters; 1 12 oil Zeiss obj. Fb, fibroblasts. Ec, epithelial cord showing cell forms. Cb, cementoblasts. Cm, cementum. D, dentine.

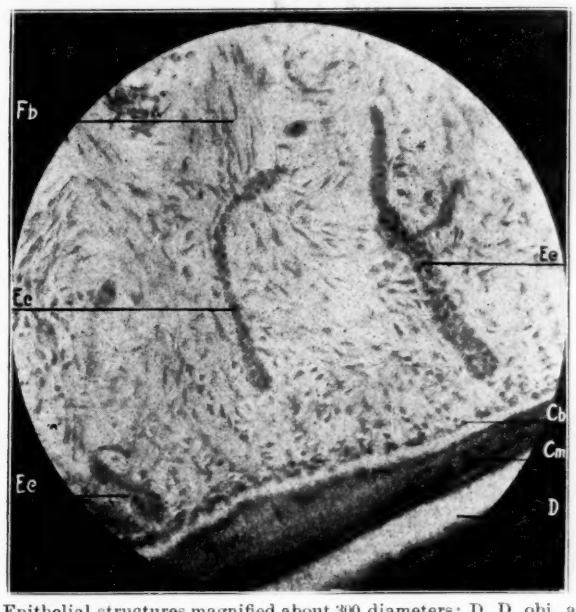
to the root (Fig. 6), this branching and net formation is shown, but the entire arrangement cannot be shown in photograph. This diagram (Fig. 7), made by Dr. Black some time ago, shows the plan as it is made out from the study of many sections.

When Dr. Black first described these structures, thirteen or fourteen years ago, in his "Studies of the Periosteum and Peridental Membrane," he considered them to be of lymphatic character, and there are things about them that support this idea, but from a study of the character of the cells they seem to be of epithelial order showing various forms, sometimes appearing ovoid, but usual-



Epithelial structures magnified about 500 diameters; 1 12 oil Zeiss obj. Ec, epithelial structure appearing to show a lumen and showing the arrangement of the e cells. Cb, Cementoblasts. Cm, cementum. D, dentine.

ly polyhedral, or cuboidal. The nucleus is always large polyhedral, or cuboidal. The nucleus is always large and conspicuous, and often shows nucleoli. (Figs. 8 and 9.)

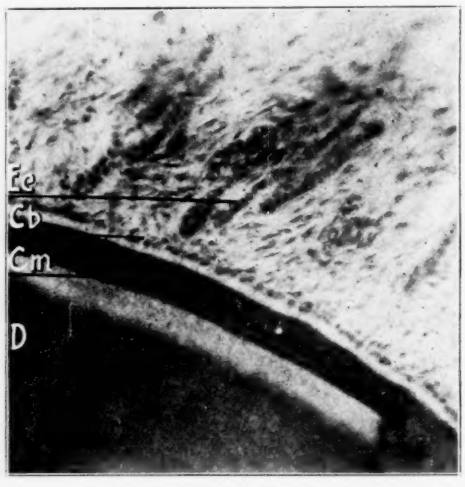


Epithelial structures magnified about 300 diameters; D. D. obj. and No. 2 projection ocular Zeiss. Fb, fibroblasts. Ec, epithelial structures. Cb, cementoblasts. Cm, cementum showing the penetration of the fibers of the membrane. D, dentine.

The cells are not arranged into true tubules in all places (Fig. 15), though what appears to be a lumen, with a circle of cells about it, may be found in a good many positions. The structures are better described as cords of cells than as true, distinct tubules. In some

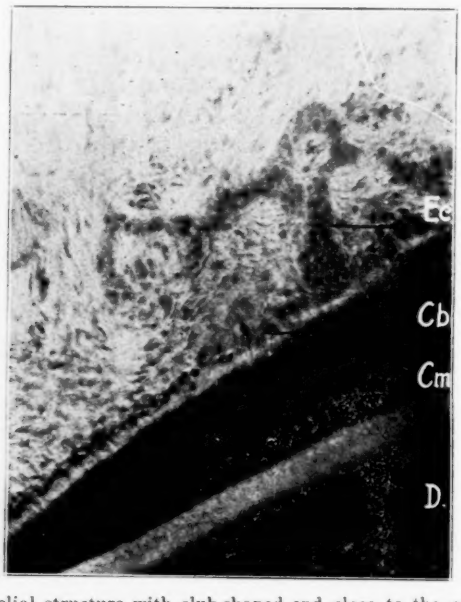
places there is a circle of cells, with one in the center. Sometimes there seems to be a central cluster and a circle around it. These appearances may be caused by a cut, which does not strike the center of the cord, or tubule, but this could hardly be the case in transverse sections. This arrangement of the cells suggests lymphatics, rather than true glands, though some of the ductless glands, as the thyroid, show alveoli solidly filled with cells.

The cords of cells lie very close to the cementum be-



Epithelial structures showing club-shaped ends. Magnified about 200 diameters; 4 10 in. Bausch & Lomb obj., No. 2 occ. Ec, epithelial cords. Cb, cementoblasts. Cm, cementum. D, dentine.

tween the fibers as they spring from it (Fig. 16), swinging out from the root and back again in hoops. In many places the end next to the cementum is club-shaped (Figs. 17, 18 and 19), and comes very close to the root between the cementoblasts. A delicate basement mem-



Epithelial structure with club-shaped end close to the cementum. Magnified about 200 diameters; 4 10 obj., Bausch & Lomb, No. 2 occ. Ec, epithelial structure with club-shaped end. Cb, cementoblasts. Cm cementum showing the penetration of fibers of the membrane. D, dentine

brane surrounds these cords (Figs. 9 and 17), and in a few places a circular arrangement of fiber may be seen about the large ones. (Fig. 20.)

I have searched for something in the form of a duct for these structures, or some connection between the epithelium lining the gingival space, and the cords. Some appearances which suggest ducts are uniformly found, but it has been impossible to follow them because of the failure to obtain complete series of sections.

In the gingival portion of the membrane in transverse sections I have found a number of very perfect tubules in section, of which Fig. 20 is the best illustration I have been able to get, but that is not as good a representation of the object as I could wish. With the microscope it shows a very perfect circle of cuboidal cells with large nuclei. In the lumen are several loose cells. There is a distinct basement membrane, and a few circular fibers. Just on one side of this is a small duct made up of four cells. When these tubules have been observed, they show a tendency to swing out from the surface of the root. Figure 21 shows these duct-like structures in longitudinal section. As they pass away from the cords of cells, they swing away from the cementum, and, passing gingivally, curve farther away from the root as the gingivus is approached. The epithelium of the gingivus presents long slender projections, often of complicated form. The connective tissue between these contains small round cells. This collection of round cells is especially conspicuous on the proximal sides, and constitutes what has been called the gingival gland.

The ducts have been followed up into these epithelial legs, where they have been lost. But even in this position

Transverse section of a duct-like structure. Magnified about 1000 diameters; 1 12 oil Zeiss obj., No. 2 acc. Du, duct showing ring of cells and loose cells in the lumen and circular arrangement of fibers around it. Du 2, small duct with but four cells showing arrangement of fibers around it. Cm, cementum.

their cell structure is very different from that of the epithelial legs, so that I would say that they do not connect with them. As far as I have been able to follow them they maintain their characteristics.

The structure referred to by Dr. Black[1] as the gingival gland (Fig. 23), and which as he states is not a gland at all, is very characteristic of the gingivus, at least in the sheep, in which I have chiefly seen it. At first I was inclined to regard it as pathologic, but it is so nearly universal in large or small form on the proximal portion of the gingivus, and has been so universally observed by Dr. Black, that it seems to be the normal condition.

The presence of these epithelial structures in the membrane is beyond question. Their nature, origin, and function can not be stated. I have showed photographs and sections of them to very many histologists and pathologists, engaged in general morphologic as well as in medical work, and almost without exception, after looking them over, they say: "On casual inspection I should say that they are probably tubular glands!" I have observed them in sections of the membrane from man, dogs, cats, sheep, pigs, about the temporary and permanent

[1] Dental Cosmos, February.

teeth in the young and the old membrane. Like all cellular elements of the membrane, they grow less numerous with age, but they have been seen in the membrane from a man 70 years old.

The size, number, persistence, and conspicuousness of

Longitudinal section of duct-like structure. Rephotographed from two photomicrographs with an A. A. Zeiss obj. Ep, epithelium covering the gum. Ep 2, epithelium lining the gingivus in the region of the gingival gland. Cm, cementum which has separated from the dentine in decalcification. Du, duct. Ec, epithelial cords. B, blood-vessels. F, fibrous tissue of the membrane.

Longitudinal section showing the gingival gland. Rephotographed from two photomicrographs made with an A. A. Zeiss obj. Ep, epithelium covering the gum. Ep 2, epithelium lining the gingivus. Gg, gingival gland showing the round cells between the epithelial legs. N, Nasmyths' membrane. Cm, cementum separated from the dentine by decalcification. Du, bit of a duct. Ec, epithelial cords.

these structures make it seem extremely improbable that they are simply embryonal remains from the epithelial cord, or external or internal tunics of the enamel organ, as suggested by the work of Von Brom, quoted by Charles Thomas[2], and as was suggested to me by Dr. Huber of Ann Arbor. I have not attempted to trace the origin of them, but in the last few weeks, by the kindness of Dr. John Palmer of Chicago, I obtained some rabbits' jaws, soon after birth. I have studied them over, and have been unable to find any trace of such structure in membranes of unerupted teeth. It seems to me that these structures must be present for a purpose. What that may be I cannot suggest, and I know nothing that throws any light on the question.

In order to work out the problem to meet the requirements of the histologist, four things must be done.

1. The origin of the structures must be traced, so as to determine from what tissue they are derived.

2. Their relation to the blood-supply must be determined.

3. Their morphology must be determined, by making a complete series of sections, both longitudinal and transverse, to determine whether they have ducts or not, or other connection with the gingival epithelium; and the complete reconstruction of them from serial section. The last task is perhaps impossible, but it could be done for small areas so as to satisfy the demand.

4. Their condition in diseased conditions of the membrane must be carefully studied.

Until such a program is followed out we can but speculate as to what the origin and function may be, and speculation of this kind does not often aid in the advancement of scientific knowledge.

[2] Dental Anatomy. 107.

SYPHILIS IN SURGICAL PRACTICE.

BY ARTHUR DEAN BEVAN, M.D.

Surgeon to Presbyterian Hospital: Associate Professor of Surgery, Rush Medical College.

CHICAGO.

My father was a physician. One day, when a boy of 16, I was in my father's office when a tall, fine-looking man of 35 or 40 came in to consult him. This man was a German-American of considerable prominence. I had often met him before, and had always admired him. He was a great thick fellow, more than six feet tall, with large brown shaggy head and beard, deep-voiced, bright-eyed, the picture of physical and mental health; a fine type of the Teutonic massiveness and vitality that has relegated the Latin races to the dying nations of the world. I remember that when I read "Cæsar's Commentaries," with the description of the giant Germans, who disputed Cæsar's advance across the Rhine, and who died so bravely, crushed by the better arms and better discipline of the Roman legions, I thought of this man; they were his ancestors. He was a picture of what they had been. After he had left the office I drove with my father on his afternoon round of visits. We had been in the buggy, driving possibly ten minutes, when my father suddenly turned around to me and, for the first time in my life, gave me some advice on the subject of sexual intercourse. He told me of the penalties of promiscuous intercourse, the virulence of gonorrhea, the ravages of syphilis. He drew a picture of an invalid wife, a blind child, the man with the blurred brain and the incoherent speech of syphilitic aphasia, and the staggering gait of ataxia. He was a graphic word-painter, and I remember as a boy it made a profound impression on me. And in some way I always associated this, my first knowledge of venereal disease, with the German who had left the office but a short time before. That was twenty-two years ago. Two weeks ago an old man, of great massive frame, dragging his

*Read before the Alumni Association of Rush Medical College, May 24, 1899.

right leg, shuffled unsteadily into my office; his pocket handkerchief and gloves were almost falling out of his right overcoat pocket; he could not articulate above a whisper, and even then could command but a few words. The left eye was dulled with an old iritis; the right eye was reddened by an acute attack; the pupil dilated unevenly with atropin; the hands presented syphilitic skin and nail lesions; and this wreck was my German, the German whom I had idealized; plus syphilis. With some difficulty I obtained his history, and, most interesting of all, the fact that he had always denied to the many physicians who had treated him for twenty years for various lesions, principally if not entirely syphilitic, syphilis. My father and myself, he said, were the only ones who knew that he had syphilis, because, as he stated, my father had told him at the end of two years' treatment that he regarded him as cured. My father died about that time, and he said no one then living knew that he had had syphilis, and he had a family and he could not have anyone know, and would I swear to him that I would not tell any one? You are all familiar with the picture I have so crudely drawn, the common picture of syphilis and its concealment, interesting only because of the frame of circumstances which surrounds it.

When I received my degree in medicine I accepted a contract position as acting assistant-surgeon in the U. S. Marine-Hospital service. I was stationed at the marine hospital in Chicago. My duties were to look after the out-patient department of the work. In this department we treated nearly 3000 patients annually, about one-third of these being venereal diseases, and of these 1000 venereal cases, many were cases of syphilis, representing all stages of the disease. Syphilis became the first great problem in disease with which I wrestled, and the diagnosis, the vagaries, the treatment, and the tenacity of the lesion became an interesting study, for which later five years of regular service in marine hospitals afforded an abundance of material. The sailor man is as a class easily the point of least resistance in the community to syphilis. His long voyages and enforced continence, and his drunken embrace of blear-eyed Venus during his short spree in port, make him an almost certain victim of infection, and the fact that he seldom early receives the benefit of proper and continued medication enables the marine surgeon, into whose hands the derelict finally drifts, to study often the natural history of syphilis unmodified by treatment. Many of our cases are honestly ignorant of having syphilis; some would deny and later confess to a syphilitic history, when confronted with positive evidence. I early learned to place little or no reliance on the previous history in making a diagnosis.

Since leaving the marine-hospital service, ten years ago, I have devoted my time exclusively to general surgery, and in this work I have found that my early syphilitic training has been of great service. I do not mean to pose as a syphilographer, but I am sure that I have been saved many mistakes by this training. I am sure that I have seen many cases which this training clearly branded syphilis to me, overlooked by the specialist, the surgeon and the general practitioner. On the other hand, I must confess that in a number of cases I have believed lesions syphilitic which were later proved to be of other origin. I have learned to know that syphilis is not a respecter of class or person—rich and poor, youth and age, priest and libertine, prostitute and virgin, guilty and innocent, all can and do acquire this disease. We must not be astonished in finding it anywhere. We must never accept a negative history as definite evidence of its absence. Syphilis is more widespread than is generally supposed. It causes many an illness when it is not recognized or even suspected. Without carrying our suspicion to extreme, we should constantly be on the watch for syphilis in our everyday work.

It is not my intention to present a discussion of typical syphilis, as is done by the syphilographers, in textbooks, but believing that a broad discussion of the unusual and often unrecognized lesions of syphilis as they present themselves to the general practitioner and specialist might interest all, I will open the discussion by reviewing some of my experiences with syphilis in surgical work. I might entitle this brief paper, then, "Unusual Syphilis in Surgical Practice."

The subject of extragenital chancre will furnish the unusual form in the primary stage. I have handled about fifteen of these lesons which I can now call to mind; most interesting to us possibly are the extragenital chancres which physicians acquire in their professional work. I have seen a number of these cases; the majority of them presented none of the characteristics of chancre and were mistaken for pus infections, or tuberculous infections, and later, when the axillary lymphatics were involved and a low form of syphilitic fever was present, the axillary lymphatics were removed; the subsequent development of the secondary symptoms cleared up the diagnosis. Several of my cases have been seen by expert syphilographers, and the primary lesion positively pronounced not the initial lesion of syphilis. In one case an expert said that if it was a chancre it certainly had none of the characteristic signs, and that he had never seen one like it. In another case, seen by me with a colleague, the syphilographer staked his professional reputation that the lesion was not specific, and yet in both, the later secondary symptoms disproved their statements. In both these cases the axillary lymphatics were removed with the idea that we had a low form of pus infection or mixed infection to deal with. The lesson to be learned from such cases is that extragenital chancres of the fingers are seldom typical. An infection on a physician's hand, which is not acute, which produces enlargement of the axillary lymphatics, which persists for more than ten days, which is locally limited, which is accompanied by a slight continued elevation of temperature, is suspicious of syphilis, no matter what the size, shape, or consistency of the sore may be.

In looking into this question I find that trained nurses very rarely acquire syphilis of the fingers. Among 500 nurses observed from 1883-1898, no cases; among physicians it is much more common than is generally believed. Among the several hundred physicians, certainly less than five hundred of my acquaintance, I know of six cases of extragenital chancre. This is almost entirely preventable and shows the necessity of the observance of the simple prophylactic rules required, and evidently followed out more carefully by nurses than physicians. The primary sore of the finger may be so small and so transient that it is not recognized; the secondary symptoms following may be slight and not interpreted and the case goes on to tertiary syphilis untreated. I have seen this in the case of a physician of unusual intelligence, who, in the light of tertiary symptoms, was able to review in this new light his previous four years and could plainly recall the primary sore and the mild secondary symptoms. In the light of this case, I have no doubt that many cases of syphilis exist in the com-

infinity unrecognized by the physician and unknown to the patient. Extragenital chancres of the lips are fairly common; usually the infection is carried from a mucous patch on the lip of the infector; sometimes, of course, due to sexual perversion, and sometimes due to an indirect infection from instruments in the hands of dentists or physicians.

I have had one chancre of the tonsil occurring in the case of a physician who had his throat treated by a throat specialist, the infection being carried by the instruments used. A great mass of glands on the side of the neck followed the small unrecognized chancre. Two prominent surgeons diagnosed tuberculosis of the cervical glands and advised removal. Prof. James Nevins Hyde and myself suggested the possibility of syphilis. The doctor patient ridiculed the idea, but decided to await developments. Within a few weeks secondary symptoms occurred; treatment, rapid disappearance of glands, but later, unfortunately, brain syphilis.

An unusual type of extragenital syphilis occurred in a doctor who presented himself with the history: He tripped and fell on an iron rail, cut the skin over the patella; wound slow in healing; examined and probed by a number of doctors; wound almost healed, and then after twenty days a circular hard ulcer developed at the site of traumatism; hard chancre from infected instruments or fingers.

A physician brought me to see his son-in-law, his grandchild and his wife, who he said had been poisoned by poison ivy. The man had a pustular syphilide, the child inherited syphilis of the skin and skeleton, the grandmother a history of having had a sore on the arm on which she usually carried the child. This healed slowly, was accompanied by weakness and deterioration of general health, and she was, when I saw her, suffering from a macular syphilide. The mother of the child had no symptoms and my doctor friend, the grandfather, has escaped.

When stationed in Portland, Ore., my position as marine surgeon brought me many patients from the salmon fishermen; some seven thousand were at the mouth of the Columbia River. These men, like sailors, frequently acquire syphilis. Two of them go in a boat to tend their nets and live together for many weeks and months. Sodomy is common, and as a result chancre, chancroid and gonorrhea of the rectum occur. I have seen several cases of chancre of the rectum among these men, but have never been able to follow out the later history of these cases to determine whether the lesion was the initial lesion of syphilis or chancroid.

The facts to be kept in mind in extragenital chancre are: 1, its atypical character; 2, that it is common, at least that it is not a rare lesion; 3, that it is possible in any individual; 4, that we should wait for secondary symptoms before placing the patient on constitutional treatment.

The second unusual form of syphilis I desire to mention is the unusually severe constitutional symptoms called syphilitic fever. I have seen one case in which I believe that it is possible that death resulted from the profound primary syphilitic intoxication before secondary symptoms developed; history of healing, hard chancre, bubo, severe pains in limbs, high continued fever, and death at the end of ten days; no post-mortem made. I have diagnosed typhoid several times and later found that I had syphilitic fever to deal with.

I shall pass over the unusual skin lesions of secondary syphilis because I am not qualified to discuss them. I shall simply remark, in passing, that I am impressed with the fact that they may simulate almost any skin lesion, and that I lose confidence in the dermatologist who with great emphasis affirms positively that a certain lesion cannot be syphilis because it lacks this or that characteristic of form, color, consistence, symmetry, etc., because I have seen a number of cases in which these positive statements were made turn out to be syphilis after all.

Syphilitic ulcerations of the skin and mucous membrane are common. As a rule, in the light of the previous history they are readily recognized. There is a large number of cases, however, in which the patient conceals the history, or is ignorant of the history, and in which there is no other sign to guide the physician. These cases form a large group, and they are frequently mistaken for other lesions. As types, I will cite the following cases:

Mrs. P. was sent to me by a dermatologist, to remove a small epithelioma from the nose. I found a small ulcer with hard base, about the size of a bean, which had existed for several years; it would sometimes scab over, but never heal. She was a woman of refinement, fine social position, and with no specific history. I put her on iodid in large doses, and in two weeks the ulcer healed. I have had two other cases on the nose with the same history and result.

Mrs. R., was sent with diagnosis of epithelioma of scalp or possibly lupus; mother of eight children, youngest 12 years; good social position; no specific history. The lesion was of that character in which it was impossible to state the pathology positively. Under iodid of potash the lesion healed in three weeks.

I have seen several cases diagnosed as carcinoma of the tongue heal under iodid. In fact, I believe we should make it a rule, before operating on these small ulcerations of skin and mucous membrane, to give the patient the benefit of the doubt and put him or her on a thorough course of iodids.

We will sometimes make the mistake of confounding some other lesion with syphilis. As an example, I recall a case of a man of 50, with palmar syphilide, history of syphilis, and an ulceration of the finger, the size of a copper cent, of one year's standing. The diagnosis was positively syphilis. A long course of iodids gave no benefit. I removed a section and Prof. L. Hektoen found carcinoma, which we believed began on a syphilitic base.

Syphilitic lesions of the nose and palate are common. I refer to them here because I have met with several unusual cases. One was sent by a rhinologist, with destruction of cartilage and bone; no syphilitic history, course of iodids 8-grain doses producing no benefit. On increasing to 70-grain doses, the lesion healed. A second case, positively pronounced by rhinologists as non-specific; no specific history; mercury produced no effect; lesion healed under 300 grains a day. A third case: I removed the greater part of the superior maxilla for a dentist; no specific history; wound became indurated and disease began to invade other jaw. Iodid in 40-grain doses produced a cure.

Cases of suppuration of lymphatic glands, where a specific history is denied, are often due to syphilis. As an example, a business man of 40, with bubo in groin, positively denied venereal disease. The pus was evacuated; sterile; wound healed slowly. I discovered a small ulceration on the nasal septum; put him on iodid; bubo and ulceration of nose healed rapidly. He then confessed to having had syphilis twelve years before.

The subject of large gummata which are mistaken

for malignant tumors forms a most interesting chapter of unusual syphilis. Esmarch has written extensively on this point, but the value of his work is not widely known. As types:

CASE 1.—A tumor of the breast was diagnosed carcinoma. Amputation of breast was done. A years later a similar tumor appeared on opposite breast; glands in the axilla enlarged; noticed, by accident, a palmar syphilide. Under large doses of iodid the tumor in the breast disappeared. Evidently the first tumor was also specific.

CASE 2.—A man of 40 was sent by Dr. Frankenthal with a tumor in the thigh the size of a fist; malignant in appearance; diagnosis probable sarcoma; no specific history; removed section and found granuloma. Under iodid the tumor disappeared. The patient later acknowledged a specific history.

CASE 3.—A man of 43 presented a tumor in the breast; no specific history; diagnosed sarcoma, which was removed; wound healed, but became indurated. Iodid in large doses; induration melted away, and the patient then acknowledged a specific history.

Gummata mistaken for a variety of lesions form a mixed class. As examples:

CASE 1.—A patient of 30, male, married three years, and two healthy children; no specific history; enlarged testicle; suppuration; ulceration of scrotum; removal of the testicle and infected skin; diagnosis, tuberculosis. The wound healed. Later there were two hard masses in the penis the size of walnuts; surgeon desired to amputate penis. I removed a section of granulation tissue, put the patient on iodid and the lesion melted away; patient cured, but still denies syphilis.

CASE 2.—Medicolegal case. A brakeman, in a railroad accident, received an injury to the shoulder; paralysis of sternocleidomastoid and trapezius; threatens to sue company; sent to me for examination and report. I found a gumma in the sternocleidomastoid along the course of the spinal accessory nerve. The patient at first denied syphilis. Under iodid the gumma melted away, and with it the lawsuit and paralysis disappeared.

CASE 3.—A man of 50; pain over gall-bladder; small mass palpable; diagnosis, gall-bladder lesion or carcinoma of liver. On making an exploratory laparotomy I found what I believed to be a gumma of the liver. The patient is still under treatment.

CASE 4.—A patient under mercurial treatment for syphilis developed pain over liver; jaundice. The jaundice disappeared under large doses of iodid; probably obstructive jaundice due to gumma.

I will pass over unusual forms of syphilis of the stomach, small intestines, and colon, of which I believe I have seen examples, because of lack of positive evidence.

The so-called syphilitic stricture of the rectum is unusual only to the men who are not familiar with its frequency. Although these so-called syphilitic strictures are usually due to gonorrhea, true syphilitic strictures occur: I have one case of syphilis of the kidney to report:

A man at St. Elizabeth's Hospital, seen for Dr. Futterer, presented a large kidney mass; explored; greatly thickened edematous capsule, both fibrous and fatty; nothing in the pelvis; two masses in the capsule which Dr. Futterer, from gross appearance, regarded as tubercular. The patient recovered from operation shortly after; admitted syphilitic history. He was put on iodid, and the kidney mass melted away; patient now well. I believe it was a syphilitic lesion of the kidney.

In order to be brief, I shall omit in my discussion any cases of unusual syphilis of the heart and blood-vessels, but shall hope that cases of this class will be presented by our internists.

The last class of cases which I desire to present comprises cases of unusual syphilis of bone and joints. The relation of syphilis to fractures can be well shown by three cases.

CASE 1.—A man of 24, under treatment for syphilis, has a gumma on the right humerus. On boarding a street-car he feels something give way in the arm and the arm falls helpless to his side. Examination reveals no new point of motion; some swelling; no deformity; no crepitus. The X-ray shows complete fracture of the humerus without displacement. Spontaneous fracture or fracture from muscular contraction is one of the results of syphilis.

CASE 2.—A man of 25 had fracture of both bones of the leg; delayed union; at the end of three months he confided to his surgeon that shortly before being injured he had secondary syphilis. At once placed on constitutional mixed treatment, union rapidly followed.

CASE 3.—Inherited syphilis of both bones of leg; bent at right angle. I believe the case to be one of late rickets; operated; straightened limb; no union. The patient returned after several months, I operated again, and placed him on iodid and mercury. Rapid bony union followed.

CASE 4.—An unusual case of double mastoid disease, operated on at interval of six weeks between; was slow in healing; patient admitted syphilis; iodids given; rapid recovery.

I have seen cases of joint syphilis mistaken for tuberculosis and gonorrheal rheumatism. I shall cite but one instructive case.

A man of 23, a large, strong, robust fellow, with carious disease of the left wrist-joint was treated by iodoform injections and resection; not cured. I believed the case to be tubercular and amputated. Later a large gumma of the arm on same side, and a deep ulceration on the skin of the face appeared. He previously denied syphilis, but now admitted it. Under iodid treatment the lesions disappeared. I have no doubt but that the wrist lesion was syphilitic.

Before closing this rapid and incomplete sketch, which is meant simply as an introduction to a general discussion by the members of the Association, let me call the attention of the Association to the fact which has impressed me more and more as I accumulate experience in the use of iodid of potash in syphilis, and it is this: The fact that a granulation melts away under iodid does not prove absolutely that it is syphilitic. Why? Because we now know that at least one other form of granulation tissue is often similarly absorbed—i. e., actinomycosis, and I had a few months ago under observation a case of blastomycetic dermatitis which undoubtedly disappeared in part under iodid.

RECENTLY the Duke of Westminster's horse, Flying Fox, won the Eclipse stakes at Sandown Park, England, the purse being £10,000—$50,000. Thus far this item is not in the least medical or of interest to our readers, but when we state that the Duke turned over the whole amount to the Royal Alexandra Hospital, Rhyl, Wales, it becomes most interesting from a medical standpoint. The *Lancet*, from which we get our information, commends this excellent example to other owners of fast horses who race for love of the sport and not for "filthy lucre."

Correspondence.

Muscae Volitantes..

LAFAYETTE, Ind., July 24, 1899.

To the Editor.—I have been very much interested in the recent articles in the JOURNAL on the seeing of the blood-corpuscles in one's own retina. So far as I am concerned it has not only never been a difficult matter for me to see them, but has been a very difficult matter in microscopic work to keep the field free from them. To see them best, it is well to prepare a slide with blood for comparison. Any good microscope stand with "B" eye-piece and ¼-inch objective may be used. Focus the instrument on the slide, to get the idea of the size and appearance of the corpuscles, then draw the tube back by the coarse adjustment until the focus is lost, when the blood-corpuscles will be seen traveling across the field exactly like the corpuscles in the capillaries of the frog's foot in that well-known experiment. A bright artificial light is best, and a blue glass placed over the eye-piece as an advantage, but by no means necessary. If the tube be drawn back till the objective is at a distance of one or two inches above the table of the instrument, and the eye held very close to the eye-piece, a very much enlarged image of a small portion of the retina will be seen; the corpuscles can be seen moving, but not so distinctly as in the first method.

Any reader of the JOURNAL who has a microscope can study this new field with great profit. The blue glass used, as recommended by Dr. Norton, is an advantage, but I find no difficulty in seeing the corpuscles with the naked eye in looking at a clear blue sky.

W. H. PETERS, M.D.

Plea for Both the Tuberculous and the General Public.

FORT HUACHUCA, N. M., July 15, 1899.

To the Editor—At last, after years of neglect, the great army of sufferers from the deadly "white plague," have had something in the way of legislation done in their behalf. All praise to the New York Legislature for taking the initial step in appropriating the money for the erection of a sanatorium in the Adirondack Mountains, for the treatment of pulmonary tuberculosis. Equally as praiseworthy was the act of the Government in turning over to the marine-hospital service, Fort Stanton, N. M., for a similar purpose. The work of turning it into a modern sanatorium is now being done, and when completed it will be used for the treatment of tuberculous sailors and marines. And if reports are true, Surgeon-General Sternberg has recently selected Fort Bayard, N. M., as a site for a similar institution where the tuberculous soldiers will be treated.

Why the tuberculous have been so long neglected and left not only to face certain death, but also to menace the health of all those around them, when a large percentage can be cured by the sanatoria method of treatment, which at the same time removes all danger to the public, is beyond all comprehension. That the example set by the New York Legislature should be followed by every state in the Union there can be no doubt.

The blind, the feeble-minded, the epileptic and the insane are being cared for by the states, and why not the tuberculous, when a large percentage, who otherwise must die, can be saved, and at the same time the general public protected from its most dangerous foe?

Tuberculosis can be cured in any climate by the sanatoria method of treatment, but the more suitable the climate the greater will be the percentage of cures. A great number have been cured in the Adirondack Mountains, and the same can be said of the mountains of North Carolina, but hardly any other part of the United States, except the Southwest, offers the suitable climatic conditions for the successful treatment of pulmonary tuberculosis. In the Southwest, namely, Arizona, New Mexico, northwestern Texas, and Colorado, are to be found all the climatic conditions having a curative influence on tuberculosis, viz., a maximum amount of sunshine, a pure dry atmosphere, altitude and a porous soil. Land is cheap and favorable sites for sanatoria are to be found in abundance in this section. Now, why wouldn't it be feasible for states having unfavorable climates for the successful treatment of tuberculosis to secure land in the above-mentioned section and erect thereon sanatoria for their tuberculous, instead of within their own borders? Would not the greater number of lives saved, the greater number of otherwise hopeless invalids returned to the producing class, the greater security from infection by this plan more than pay the additional expense it would incur?

The tuberculosis craze is abroad, not only throughout the land, but throughout the world, and now seems an auspicious time for the profession to urge proper legislation. When the general public becomes educated to the fact that tuberculosis is a contagious and a preventable disease; when the different states provide sanatoria for their tuberculous; when the general practitioner learns to diagnose incipient tuberculosis, and becomes honest enough to tell his patients their true condition and advises them to go where they will have the best chance of recovering, then and then only will we be able to successfully contend with the greatest destroyer of mankind.

ARCH. DIXON, JR., M.D.

Exstrophy of Bladder. Correction.

INDIANAPOLIS, Ind., July 29, 1899.

To the Editor—My discussion of Dr. Allen's paper on "Exstrophy of the Bladder," as printed in the JOURNAL of July 29, is somewhat garbled. I did not make bold to say: "It is not rational to make the operation of intestinal implantation," but did say that under certain conditions Maydl's brilliant operation, as successfully executed for the first time in America by Dr. Allen of Cleveland, might be contraindicated. All agree that the operation of intestinal implantation of ureters should not be practiced if the kidneys are unsound.

In the case which came under the writer's observation there was on the left side a pyonephrosis, and on the right a chronic nephritis. The patient was exsanguinated and could hardly have borne such an heroic operation as that of Maydl. Therefore a method much less dangerous and requiring less exquisite skill for its performance, namely, the method of Sonnenberg, was selected.

I prefer not to go on record as one who, having realized the beggarly results of Sonnenberg's operation, would criticize the great work of Dr. Allen, to whom we all should unstintingly give honor.

Very sincerely yours,

J. RILUS EASTMAN, M.D.

A National Board of Health.

MINNEAPOLIS, Minn., July 28, 1899.

To the Editor—An editorial in the JOURNAL (July 22, p. 234), speaking of a national department of health, refers to the endorsement of such by several medical bodies—the American Public Health Association, the AMERICAN MEDICAL ASSOCIATION, and the Conference of State Boards of Health. In connection with the latter association, it said "recommended with practical unanimity—three delegates not voting." This is a misrepresentation. The question brought to a vote at the Conference at Richmond was *not*, "Shall we have a *national* board of health?" but *"Shall we endorse the Spooner bill?"* Quite a different proposition. I was one of those who put myself on record as *not voting*, for the motion was so worded that one voting in the negative was made to appear to be voting against a national board of health. I was not willing to vote to endorse the Spooner bill. At the same time, I was not willing to appear to be voting against a national board of health;

hence the request to be recorded as *not voting*. Two others did the same, and I presume for the same reason.

From the editorial it would also seem that the National Conference vote was strongly affirmative, for the term is used, "with practical unanimity." As a matter of fact, there were probably not more than twenty voters in the room when an endorsement of the Spooner bill was called for. With a *viva voce* vote, it is hard to judge how many votes were cast in the affirmative. The few keeping silent or voting in the negative added to the three "not voting" does not leave "practical unanimity."

The Spooner bill is meant to please those who insist on state rights in quarantine, as against national rights.

We should have a national board of health established on as firm a foundation as is the army, the navy and marine-hospital service. The Spooner bill will never give such an oganization.

Respectfully,

H. M. BRACKEN, M.D.

Breech Presentations.

ELGIN, Ill., July 30, 1899.

To the Editor—I have just attended a German woman in her fifth confinement. The presentation was a breech, as was the case in her former confinements. Having never heard of another case of five successive breech presentations in one woman, I take the liberty of reporting this to you for publication. The children were all boys, and three are living. Two died during delivery.

EDWARD H. ABBOTT, M.D.

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

American Journal of Obstetrics, July.

1.—*Conservative Gynecology. Jos. Taber Johnson.
2.—*Is a Sloughing Process at the Child's Navel Consistent with Asepsis in Childbed? Robert L. Dickinson.
3.—*Some Observations on the Early Use of Purgatives after Abdominal Section. Otto G. Ramsay.
4.—*Role of Wound Infection as a Factor in Causation of Insanity. A. T. Hobbs.
5.—*Remote Result of Shortening Round Ligaments and Hysteropexy by Vaginal Section. Henry T. Byford.
6.—*Maternal Impressions. Henry F. Lewis.
7.—*Vaginal Celiotomy, with Report of Eleven Cases. A. Lapthorn Smith.

Annals of Gynecology and Pediatry (Boston), July.

8.—*Disorders of the Menopause. E. W. Cushing.
9.— Remarkable Result from Use of Antistreptococcic Serum. A. G. Deardorff.
10.— Diphtheria—with Some Notes on the Modern Scrumtherapy. W. F. Matson.
11.—*Therapeutics of Whooping Cough. F. J. Taylor.

Bulletin of Johns Hopkins Hospital, June.

12.— Duties and Dangers of Organization in the Nursing Profession Geo. M. Gould.
13.— Pin in Vermiform Appendix. James F. Mitchell.
14.—*Presence of Typhoid Bacilli in Urines of Typhoid Fever Patients. Norman B. Gwyn.
15.—*Case of General Infection by Diplococcus Intracellularis of Weichselbaum. N. B. Gwyn.

Western Medical Review (Lincoln, Neb.), July 15.

16.— Criminal Abortion. Henry T. Byford.
17.— Reflexes as an Aid in Diagnosis. J. M. Aikin.
18.— Report of Some Suppurative Cases. J. T. Miller.
19.—*Relations of Certain Neuroses to Pelvic and Genital Diseases of Women. H. G. Wetherill.
20.—*Plea for Tenotomy as a Preliminary to Amputation. Byron B. Davis.
21.— Hydrophobia. S. E. Cook.
22.— Some Surgical Cases. J. W. Bullard.
23.— Retrospect of Forty Years in Practice of Medicine and Surgery. Geo. W. Wilson.
24.— Organotherapy. P. E. Koerber.

Annals of Otol., Rhin. and Laryngology (St. Louis), May.

25.—*Presidential Address before American Laryngological, Rhinological and Otological Society, 1899. S. E. Solly.
26.—*Facial Nerve in its Relations to the Aurist. Geo. L. Richards.
27.—*Use of Rubber Splints in Treatment following Intranasal Operations. J. Price-Brown.
28.— Removal of Tonsil and Adenoid Followed by Fatal Result. J. A. Stucky.
29.— Question of Posticus Paralysis, Part ii, and the Innervation of the Larynx During Breathing. A. Kuttner and J. Katzenstein.

Archives of Ophthalmology (N. Y.), May.

30.—*Case of Paralysis of Divergence: its Bearing on the Theory of Squint and Heterophoria. Alexander Duane.
31.—*Further Contribution to Extraction of Particles of Steel or Iron with Haab's Large Electromagnet. A. Barkan.
32.— Bullet Wound through Head with Loss of Right Eye and Vision much Impaired in Left. J. H. Delany.
33.—*Use of Extract of Suprarenal Capsule in Diseases of the Eye. W. H. Bates.
34.—*Concerning Bacteriology of Acute Catarrhal Conjunctivitis. C. A. Veasey.
35.—*Injection of Weak Sterile Salt Solution into Collapsed Eyes. Herman Knapp.
36.—*Note on Use of Euphthalmin. Herman Knapp.
37.—*Note on Use of Holocain. Herman Knapp.
38.— Nerves of the Human Lid. Ludwig Bach.
39.— Corneal and Scleral Nerves as Shown by Golgi-Cajal's Osmium Bichromate Silver Method. Ludwig Bach.
40.— Description of Portable Electromagnet, an Original Device to be Used in Connection with any Incandescent Electric-Light Current, for Removal of Pieces of Steel from Interior of Eyeball. W. B. Johnson.

International Medical Magazine (N. Y.), July.

41.—*Recent Inquiries Concerning Blood Changes Induced by Altitude. S. E. Solly.
42.—*Laboratory as an aid in Diagnosis and Treatment of Diseases of the Stomach. A. Robin.
43.— Late Consecutive Oropharyngeal Syphilis. Lewis S. Somers.
44.— Most Important Requisites to Correct Diagnosis in Chronic Disease. Boardman Reed.
45.— Present Day Requirements in Management of Pregnant Women. E. A. Ayers.
46.— Syphilis—The Chancre. J. D. Thomas.
47.— Functional Disturbances of Ocular Muscles. Part iii. Treatment. W. L. Pyle.
48.— Summer Complaint. J. Madison Taylor.

Pacific Medical Journal (San Francisco), July.

49.—*Address to Students of College of P. & S. A. C. Girard.
50.—*Lecture. M. H. Simons.
51.—*Patholesia, with some Cases. C. F. Buckley.
52.— Division of Abdominal Incision a Week after Suprapubic Hysterectomy for Fibroid of the Uterus. Henry Kreutzmann.
53.— Experimental Researches with Vita Aurantii (Haber). Louis Gross.

Denver Medical Times, July.

54.—*Medical Efficacy of Nosophen and Antinosin in Eye, Ear, Nose and Throat Affections. James A. Lydston.
55.— Plea for Psychic Realism. James Weir, Jr.
56.— Treatment of Puerperal Phlegmasia Alba Dolens. T. Mitchell Burns.
57.—*Is an Absolute Condemnation of Alcohol Just? Albert Bernheim.

Kansas City Medical Record, July.

58.—*Some Remarks on Cerebrospinal Meningitis. J. Block.
59.—*Importance of a Diagnosis of Melancholia in its Incipiency, with a Study of Two Cases of Convulsive Form. S. Grover Burnett.
60.— Chronic Lacunar Tonsillitis. Chas. E. Clark.

Am. Journal of Surgery and Gynecology (St. Louis), June.

61.— Ophthalmologic Surgery in the Country, with Special Reference to Acute Ulcer of Cornea. John Fee.
62.—*Successful Removal of Piece of Wood Imbedded in Brain Thirty-two Years, without Impairment of Cerebral Function—Knife-Blade in Brain, Removal, Death. Z. H. Evans.
63.— Electricity in Gynecologic Practice. J. A. Gracey.
64.—*That "First Hysterectomy." R. E. Haughton.
65.— Division of Fee from Standpoint of Country Doctor. Finis Purdue.
66.— Trouble with Vulvar Papillomata—a Freak. H. D. Fair.
67.— Case of Infantile Menstruation. G. A. McBride.
68.— Criminal Abortion. Elizabeth McIntyre.
69.—*Treatment of Carbuncles. M. P. Creel.
70.— Uses and Effects of Gude's Manganiferous Iron Peptone in Gynecology. Julius Heitzmann.

Medical and Surgical Bulletin (Nashville, Tenn.), July.

71.— Injuries to Pelvic Floor and their Consequences. M. C. McGannon.

Woman's Medical Journal (Toledo, Ohio), July.

72.— Woman Physician in Official Positions. Elizabeth F. Kearney.
73.— Women and the Professions. John W. Million.
74.— Operation for Webbed Fingers. Anna M. Braunwarth.
75.— A Missed (?) Abortion. Report of Case. Eliza J. Hyndman.

Cleveland Medical Gazette, June.

76.— Something About Phagocytes. D. N. Kinsman.
77.—*Disinfection of Railway Coaches and Street Cars Operating in Ohio. Frank Warner.
78.— Observations on Use of Antitoxin in Treatment of Diphtheria, based on Experience with Sixty-nine Cases. M. A. Albl.
79.— Device for Washing out Pelvis of Kidney Through Ureter. L. B. Tuckerman.
80.— Instrument for Direct Cystoscopy in the Male, and for Posterior Urethroscopy. L. B. Tuckerman.

Medical Fortnightly (St. Louis), July 15.

81.— Physiology. A. L. Benedict.
82.— Vesicular Degeneration of the Chorion. Carl E. Black.

Medical Age (Detroit, Mich.), July 10.

83.—*Acute Catarrh of Middle Ear as a Sequel of la Grippe. S. W. Smith.

84.—Deformities Illustrated. Daniel La Ferté.

Columbus Medical Journal, July 5.

85.—*Treatment of Fractures of Patella. W. J. Means.
86. Pneumonia in Children. Wm. A. Dickey.

Northwestern Lancet (St. Paul), July 1.

87. President's Address, N. D. Medical Society. F. R. Smyth.
88. Medical Federation. F. A. Dunsmoor.
89. Abdominal Hysterectomy in Treatment of Malignant Diseases of Uterus. J. L. Rothrock.
90.—*Plea for better Disinfection in Typhoid Fever. F. B. Miner.
91. Probing the Nasal Duct. J. H. Rindlaub.

Medical Record (N. Y.), July 29.

92.—*Report of Twelve Cases of Prostatic Hypertrophy Benefited by the Bottini Operation, with a Few Comments and Suggestions. Ramon Guitéras.
93.— Nephro-Ureterectomy for Traumatic Hemato-Hydro-Nephro-Ureterosis. John E. Summers, Jr.
94.— Fracture of Inferior Maxilla. Henry L. O'Brien.
95.—*Method of Maintaining Approximation after Colles' Fracture, by Short Lateral Splints without Pressure on Tendons or Interference with the Circulation. A. E. Rockey.
96.— Comparative Chest Measurements. H. M. Lee.
97.— Case of Complete External Dislocation of the Patellæ. J. E. Courtney.
98.—*Case of Tetanus Treated with Antitoxin. A. de Yoanna.

New York Medical Journal, July 29.

99.— Cerebral Abscess in Child Three Months Old, complicated with Erysipelas of Head and Face. Operation. Recovery. Cursory Consideration of Diagnostic Value of Symptoms. William J. Doyle.
100.—*Modern Therapy of Tympanic Cavity. M. A. Goldstein.
101.— Anesthesia: Nitrous Oxid; Ether; Chloroform. S. Ormond Goldan.
102.—*Odd Types of Disease. F. Savary Pearce.
103.—*Report of Two Cases of Typhoid Infection without any Intestinal Lesions. August Jerome Lartigau.
104.—*Early Recognition and Management of Malignant Disease of Digestive System. Max Einhorn.

Cincinnati Lancet-Clinic, July 29.

105.—*Random Observations. F. O. Marsh.
106.— Vagaries in Tuberculosis. H. H. Spiers.

Medical Review (St. Louis, Mo.), July 29.

107.—*Further Contribution in Regard to Temporary Glycosuria in Connection with Cerebral Hemorrhage. R. B. H. Gradwohl.

Medical News (N. Y.), July 29.

108.—*Constipation Considered from Standpoint of Proctologist. A. B. Cooke.
109.—*Asthenopic Symptoms and Headache Caused by More Common Forms of Intranasal Disease. Carolus M Cobb.
110.— Intrapubic Route in Surgery of Uterus and its Adnexa. William H. Wathen.
111.—*Serum-Treatment and its Results. Hermann M. Biggs.

Boston Medical and Surgical Journal, July 27.

112.— Not the Disease Only but Also the Man. The Shattuck Lecture. James J. Putnam.
113.—*Peritonsillar Abscess. Frederick C. Cobb.
114.—*Case of Septicemia Treated with Normal Salt Solution. Carroll E. Edson.

Philadelphia Medical Journal, July 22 and 29.

115.—*Acromegaly. William Nicholas Lackey.
116.—*First-Aid Package in Military Surgery. N. Senn.
117.—*Concerning Corpuscular Phoses and Aphoses. George M. Gould.
118.—*Report of Case of Abscess Posterior to Appendix, Discharging Through Umbilicus, Refilling and Causing Perityphlitis and General Peritonitis. Samuel H. Friend.
119.—*Horseshoe-Kidney. D. E. Hills.
120.—*Mechanic Laxative Taken by Mouth. Henry S. Upson.
121.— Pictorial Demonstration of New Method for Ballooning the Rectum and for Removal of Foreign Bodies from Anus and Rectum without Anesthesia. Thos. Chas. Martin.
122.—*Irritation-Exostoses of Human Foot. E. H. Bradford.
123.—*Case of Syphilitic Fever, with a Discussion of Diagnosis of Fevers. D. W. Prentiss.
124.—*Treatment of Puerperal Septicemia by Antistreptococcic Serum. Edwin Rosenthal.
125.— Some Points in Diagnosis of More Common Forms of Nasal Obstructions. Charles N. Cox.
126.—*Angioneurotic Edema. H. F. Slifer.

Maryland Medical Journal (Baltimore), July 29.

127.—*Treatment of Epidemic Cerebrospinal Meningitis with Arsenite of Copper. Louis Kolipinski.

AMERICAN.

1. **Conservative Gynecology.**—The president's address at the American Gynecological Association, at its late meeting, dwells chiefly on two points: 1, the danger of overlooking early cancer of the uterus and neglecting the essential measures to save the patient, and, 2, the controversy between active and conservative gynecology.

2. **Best Management of Umbilical Cord.**—Dickinson's article is a very complete review of the literature on the management of the cord, and a plea for the methods which he thinks are best. He believes that infection from the cord is a much more common cause of infant mortality than is generally appreciated, and that the common practices are not in accord with the best surgical principles. He advocates complete removal of the cord, amputation at the skin margin, and describes the methods of securing the vessels by ligature, suture and pressure. In the first case he exposes the vessels by drawing the sheath and gelatin away from the points of amputation, ligating and cutting them off short. This method is, he claims, much more sure to control bleeding than the common mass ligature usually used. In suturing the vessels the cord is drawn upward and severed through the capillary ring and the vessel seized in an artery clamp. The needle is taken in the right hand and a simple continuous stitch is run across and its ends tied together, or a subcuticular stitch (Kendall Frank) put in place. If it is desired to ligate as well as sew with the same silk, one loop of the stitch sweeps around the artery and the other around the vein. Simple pressure needs hardly to be described, but will require further testing in a long series of cases to see whether it gives rise to any more secondary hemorrhages than the older methods. He reviews the objections to complete primary amputation and thinks that with proper surgical antisepsis they hardly require argument. A rather full bibliography is appended.

3. **Purgatives after Abdominal Operations.**—In this article Ramsay reports the results of a series of experiments on patients, with the careful use of purgatives after operation, contrasted with a similar series where they were not used. He thinks that the results are sufficiently conclusive to make further argument on the subject of increased danger to the patient following early interference with the bowels unnecessary. His conclusions are: That it is important both for the welfare of the patient and for the comfort of the operator to attend carefully to the diet and to the thorough emptying of the bowels before any abdominal operation; that the bowels should be moved and the distension relieved soon after operation, for the comfort of the patient as well as to avoid possible dangerous complications; that in the simpler groups of operations, such as suspension of the uterus, myomectomies, the removal of uncomplicated ovarian tumors, and in uncomplicated hysterectomies, the administration of the calomel and the use of enemata on the second day is followed by a perfectly satisfactory convalescence; that in cases of beginning peritonitis, in cases where numerous adhesions have been broken up or large raw areas left, in cases where the intestines have been freely handled or long exposed, and finally in emergency operations where no previous preparations can be made, Dr. Byford's method of immediate purgation is indicated.

4. **Wound Infection in Insanity.**—Hobbs writes on the effects of puerperal injuries on the nervous system and in producing insanity by exciting erysipelatous inflammations and septic poisoning. He claims that in the London (Canada) Asylum they have had in their surgical treatment of such cases 30 to 45 per cent. of recoveries, and improvement in 20 to 25 per cent. He says that the fact that it is evident that septic infection is mainly responsible for these inflammatory conditions, which in turn are responsible for insanity, and the large percentage of these cases that resulted in mental recovery or improvement after removal of the lesions shows how important a factor the micro-organism is in producing mental alienation.

5. **Shortening Round Ligaments and Hysteropexy by Vaginal Section.**—Byford does not discuss the technic in detail but merely gives the method he has used in thirty-one cases, and calls attention to the results. He combines hysteropexy, or suture of the uterus over the bladder, with shortening of the round ligaments, which he thinks is better than either operation alone. He has followed up his cases as far as possible, and knows of but one recurrence of the retroversion, and two cases in which the uterus sank lower into the pelvis without complete retroversion. In his later cases he has drawn the ligament tighter and sutured the fundus higher over the bladder than in his early ones and has not observed any failure. He reports three cases in detail in which he later opened the peritoneal cavity and one case in which pregnancy went to term after the operation, with good results.

6. See abstract in JOURNAL, May 27, p. 1173.

7. **Vaginal Celiotomy.**—Smith reports eleven cases of vaginal celiotomy, discusses the technic and concludes that the operation is indicated in retroversion with fixation, in mild diseases of the ovaries and tubes, and small fibroids. In his experience, however, the freeing of the retroverted adherent uterus is more difficult by this method, and vaginal fixation not so reliable, in curing retroversion and relapse, as is ventral fixation If the uterus is movable and there are no adhesions, one is not justified in opening the peritoneal cavity in any attempt to shorten the round ligaments. In such cases Alexander's operation is easy, safe, quick and more reliable. In removing pus tubes the operation by the vagina is more difficult than the abdominal operation, except where the uterus is also to be removed. When the uterus is split in half and each half removed with its corresponding tube, and when clamps are used the vaginal operation is easier than the abdominal with ligature. The vaginal route is a little safer on account of the drainage it affords, but there is more risk of injuring the ureter. Smith does not favor the removal of the uterus, even if both ovaries and tubes have been removed, on account of the bad moral and physical effects, and he dislikes clamps as compared with ligatures, on account of bruising the nerves and consequent prolonging of convalescence. For the removal of chronically inflamed ovaries and tubes, vaginal celiotomy has decided advantages in that it is less dangerous because the intestines are not exposed to handling; it is less painful; there is no telltale scar, and little danger of hernia. Much good conservative work on the ovaries and tubes can be done by the vaginal route without risk or pain to the patient, and he enumerates a number of conservative operations that can be thus performed with advantage. Tubal pregnancy before rupture, not later than the sixth or eighth week, can be readily removed by vaginal celiotomy. This operation, however, is contraindicated when the pregnancy has advanced twelve weeks or has ruptured into the abdomen. In general terms, all cases in which the trouble is small in size and located low down can and should be operated on by vaginal celiotomy, while everything large and high up should be reserved for abdominal section.

8. **Disorders of the Menopause.**—Cushing's paper discusses the various disorders attending the change of life; the circulatory, consisting in hot flashes and hemorrhage; the nervous troubles, such as palpitation, fainting and hysteroneuroses; the psychic disorders, and also the complications incident to the period of life in which this change occurs. Of the latter cancer is the most serious, and he calls attention to the necessity of care, noting all irregular and profuse hemorrhages occurring at this time and the ease of diagnosis of the condition by competent examiners, the comparative safety of the operation and its success as a rule in preventing recurrence. The next most important complications are tumors, fibroids and adenoma, and the endometritis which is liable to occur at this time.

11. **Whooping Cough.**—Taylor summarizes the therapeutics of this disorder as follows: 1. Isolation and disinfection; 2, pure air and warm clothing; 3, keep the patient up to his most perfect standard of vigor, by frequent feeding; 4, palliate by the use of antipyrin, belladonna, and bromids internally, with inhalation of formaldehyde vapor to relieve paroxysms and nervous irritability; codein, tartar emetic, ipecac, and squills for catarrhal condition, and iron, arsenic and strychnin to tone up and strengthen in convalescence.

14. See editorial, page 358.

15. **General Infection by Weichselbaum's Coccus.**—Gwyn reports what he thinks is the first instance recorded of general infection or septicemia from the diplococcus intracellularis. The patient was admitted to the Johns Hopkins Hospital, November 4, supposed to be suffering from typhoid fever, and died on the morning of the 6th. The autopsy revealed Weichselbaum's germ in the blood and in the inflamed joints. This throws some light on the arthritic infections of cerebrospinal fever.

19. See abstract in JOURNAL, March 11, p. 545.

20. **Tenotomy as a Preliminary to Amputation.**—Remarking first on the difficulty in muscular subjects in performing amputations, on account of the tendency of uneven contraction of the muscles, thus making an uneven stump, Davis pleads for a preliminary performance of tenotomy. He has not attempted to study the subject historically. Dawbarn's suggestion to cut the ham strings before amputation of the hip-joint is the first with which he is conversant. His experience is not extended to over a dozen cases, but it has been sufficient to make him view the procedure with great favor. He believes, in addition to the great ease of the operation and the improved appearance of the stump, that painful stump and conical stump would be less frequently met with. In cutting the tendons it is important to avoid dividing the large nerve trunks. If this rule is followed the nerves will draw well up above the cut stump of the muscles, and can be disregarded, as they will be out of danger of being imprisoned in cicatricial tissue.

25. **President's Address.**—The points made in Dr. Solly's presidential address are the relation of nasal disorders to tuberculosis, as observed by him in his practice. He disagrees entirely with Dr. Ingals' deductions that disease of the upper air-passages has a deterrent influence on pulmonary tuberculosis, and is inclined to believe with Dr. Freudenthal that in many cases the bacillus finds the readiest point of entrance in the nasopharynx behind the nasal obstruction. The facts and theories appear to him to indicate the importance of treating the respiratory tract as a whole.

26. See abstract in JOURNAL, June 24, p. 1440.

27. Ibid.

30. **Paralysis of Divergence.**—After reporting a case, Daune enters on a thorough discussion of the theories of periodic squint, and of divergence and its anomalies, and explains the pathogenesis as follows: Exophoria and divergent squint may be due to: 1. Underaction of an adduction—insufficiency in the true sense of the word—or overaction of the abductor, due to abnormalities in structure, insertion or innervation—muscular squint or exophoria; not very frequent by itself, but frequent as a complication. 2. Overaction of the diverging power—divergence-excess; fairly common. 3. Underaction of convergence—convergence-insufficiency; very frequent; may be either accommodative (in myopes) or non-accommodative. 4. One or more of the above anomalies combined—mixed conditions. Such a combination usually obtains in long-standing and marked cases of concomitant divergent squint. Esophoria and convergent squint may be due to: 1. Underaction of the abductor—true insufficiency—or overaction of the abductor, due to abnormalities in structure, insertion, or innervation—muscular squint or esophoria; not very common by itself but frequent as a complication. 2. Overaction of convergence—convergence-excess; very frequent; may be either accommodative (in hypermetropes) or non-accommodative. 3. Underaction of the diverging power—divergence-insufficiency; rare. 4. One or more of the above causes combined—mixed conditions. Such a combination usually obtains in long-standing and marked cases of concomitant squint. It is by following an etiologic classification like this that we attain the best success in both diagnosis and treatment.

31. **Haab's Electromagnet.**—Barkan reports 7 cases of extraction of particles of iron and steel from the eyeball, with Haab's large electromagnet, and sums up the results in these and in 5 cases previously reported; 3 eyes had to be removed on account of panophthalmitis, which in two cases had certainly set in immediately after the injury. In those cases the magnet did good work but against impossible odds. Eight eyeballs have been saved, 4 with very good and 4 with partial vision. One man died of delirium tremens. He has found it advisable to always enlarge the wound previous to extraction, in order to facilitate the exit of the foreign body. A meridianal sclerotic section might be advantageously tried in cases of perforation of foreign bodies into the vitreous. Haab's magnet does all that the hand magnet will do, and more, but must be used guardedly. Compared with the latter it avoids destruction of the vitreous and diminishes danger of infection. It is a good and safe sideroscope.

33. **Suprarenal Extracts in Ophthalmia.**—Bates finds that suprarenal extract is a powerful astringent, having a strong effect on local and general circulation. He describes the methods of preparation of the aqueous solution, its chemical and physiologic properties, so far as known, and gives the

details of a number of cases in which it was used in ophthalmic practice. He thinks it is an astringent of great value, and during the five years he has used it he has seen no disagreeable effects. Within the limits of its sphere of activity, no other substance can take its place.

34. **Bacteriology of Conjunctivitis.**—The conclusions of Veasy's paper are as follows: It would seem that for Philadelphia and the immediate vicinity, by far the most frequent cause of acute catarrhal conjunctivitis is the pneumococcus of Fraenkel; that occasionally it is produced by the Koch-Weeks' bacillus, and that the clinical manifestations of both are so similar in severe cases that it is practically impossible to distinguish between them without a bacteriologic examination; that the experiments of Gifford showing the contagious character and its reproduction with anaërobic cultures have been fully corroborated; that it has also been reproduced by the writer with a pure aërobic culture; that it is a disease met with more frequently in young adults, but apparently may occur at any age.

35. **Sterile Salt Solution Injected into Weak Eyes.**—Knapp reports three cases in which he used physiologic salt solutions to replace the eye fluids, and concludes as follows: According to the foregoing observations and experiences, I believe I am justified in recommending the injection of a sterile physiologic salt solution—or any other sterile and indifferent liquid, for instance, boric acid solution—into the eye with a small syringe under the following conditions: 1. When from lack of vitality in old age or any other cause the cornea sinks in so that the eye collapses in such a way as to prevent the wound from closing exactly, a liquid should be injected until the globe has resumed its shape and the lips of the wound apply correctly. 2. Not only remnants of cataract, but also cholesterin and other heterogeneous substances, including perhaps some movable foreign bodies, may be syringed out of the eye with impunity and success. 3. When during the extraction of a complicated cataract the fluid vitreous escapes in such a quantity that the eyeball collapses either totally or in such a degree as to prevent the closure of the wound, liquid should be injected to refill the globe and make the wound close. 4. When from an operation or an injury the eye collapses, injection of a sterile indifferent liquid may restore the shape of the globe, facilitate the closure of the wound, and ward off infection from the entrance of conjunctival secretion into the eye. The above histories demonstrate that eyes whose chances of recovery are unfavorable may be saved by intraocular injection,—saved, I am inclined to believe, in a greater percentage than if such treatment were omitted.

36. **Euphthalmin.**—According to Knapp, euphthalmin in 10 per cent. solution is without a rival as an aid for ophthalmoscopic examination. As a cycloplegic it does not compare with sulphate of atropia and is even more unreliable than homatropin. It does not irritate the conjunctiva or the skin, and he recommends it for routine use to dilate the pupil in ophthalmoscopy.

37. **Holocain.**—After using it for more than a year, Knapp, thus states his experience with holocain: 1. It is as powerful a local anesthetic as cocain, over which it has several marked advantages, in that it acts (1 per cent. solution) in much shorter time, one-third to 1 minute, and it does not interfere with circulation. It does not dry the cornea as much as cocain. For the removal of foreign bodies it is an ideal anesthetic. It does not suck in germs that may have contaminated the foreign body. Cocaine is an anesthetic, but not a remedy, while holocain has a good influence in septic ulcers of the cornea, though he has not observed its action in this regard to such an extent as stated by Derby.

41. **Blood Changes Induced by Altitude.**—Solly first reviews the statements and theories in regard to blood changes induced by altitude, and concludes that the theory of regeneration of the blood cells proposed by Miescher, Egger and others is the correct one, being supported by the recent work of Schaumann and Rosenquist, of whose experiments he gives an account, also by those of Herrera and Lope. He briefly states some of his own experiments made in Colorado, which also support this view, and suggests that the members of the Climatological Association could aid materially in this problem by having blood examinations made of their patients or of persons in normal health who will co-operate, before and after leaving sea level to try the climate of our interior plateaus. The effect on the blood, in visiting the sea shore and desert regions of moderate elevation, would also be a good subject of inquiry.

42. **The Laboratory in Stomach Diseases.**—Robin dwells on the value of chemical analysis in the diagnosis of stomach disorders, and believes the biochemical laboratory is of the greatest value in these affections.

49. **Address.**—Girard presents some thoughts concerning the recent war.

50. **Lecture.**—Simons' remarks concern The Naval Medical Corps, its duties and experience in the late war.

51. **Patholesia.**—The title of this article is a new name devised by Buckley to cover the same ground as the popularly used "hysteria." He offers it as a needed substitute for the older term, and as indicating etymologically the condition, a disorder of the will.

54. See abstract in JOURNAL, June 24, p. 1448.

57. **Alcohol.**—This article is a plea for the use of alcohol in medicine, and a defense, practically, of its use as a beverage, though this is not professed. The author, however, gives his conclusions as follows: Alcohol, used discriminately, at the right place and at the right time, is beneficial. Alcohol, used habitually and quite particularly in large quantities, is noxious. Alcoholic beverages are the more dangerous the worse they are, the more adulterated they are, consequently only the purest beer, the purest wine, the purest whisky is that which we should use, if we use it at all.

58. **Cerebrospinal Meningitis.**—Block's paper reports some clinical histories which he credits to cerebrospinal meningitis, and which, in his opinion, is due to the same micrococcus as pneumonia.

59. **Melancholia.**—Burnett reports two cases of melancholia attended with convulsive attacks, and refers to Clouston's description of this form of the disease. He believes that an early diagnosis of melancholia with immediate private care will almost insure a recovery.

62. **Piece of Wood in the Brain.**—Evans reports the case of a man who received a wound in the face during the Civil War, in 1862, which healed up; and who finished his term of service in the army without serious inconvenience. A year before his call on the doctor he received a blow in the face by a falling plank, in exactly the spot of the former injury. This produced an abscess, which was opened, but as the discharge continued, he came to the doctor. In probing the wound, dead bone was found, and by the free use of cocain the ethmoidal cells and the floor of the skull were opened up, exposing the dura, which was swollen and exuded pus through a small opening. A small probe was passed, coming in contact with a hard substance which was removed by a Pean's forceps. It turned out to be a piece of pine wood measuring 1¼ inches in length and one-third of an inch in thickness, imbedded in the brain substance. Hemorrhage was severe but was controlled by packing the cavity with gauze, which was removed in twenty-four hours and the wound flushed with warm water. In a few days the cavity contracted and the flow of pus ceased. Thirteen days later the patient was seized with partial paralysis affecting the same side of the body from which the piece of wood was removed, also paraphasia and melancholia. He has since recovered from the paralysis. The duration of time in which the wood was left in the brain was thirty-two years. Evans also reports a case of extraction of a knife blade from the left frontal lobe, which had been imbedded eighteen months. Death followed removal, in eight days.

64. **That "First Hysterectomy."**—Haughton's article is a defense of his claim of having performed the first hysterectomy in the state of Indiana, which had been criticised by Dr. Mary E. Dixon Jones.

69. Published also in N. E. Med. Monthly, July. See JOURNAL, July 15, title No. 90, p. 150.

83. **Catarrh of Middle Ear, From Influenza.**—In this paper Smith treats of otitis media as a complication of la grippe, calling attention to its importance, the dangers of its neglect and the method of early and timely treatment. He reports four cases illustrating his views. He believes a large

percentage of these cases might be cut short or aborted by local depletion or a little active purgation, if seen at the onset of the disease.

84. **Deformity.**—LaFertè's paper describes and illustrates a number of cases of deformity relieved by operation.

85. **Fractures of Patella.**—After general remarks on the treatment of patellar fracture, Means briefly reports six cases, some of them treated by non-operative methods and others by opening of the joint and suturing the parts, and concludes as follows: The results of non-operative methods are unsatisfactory, both as to long confinement and functional disability. The methods of maintaining apposition of the fragments by external appliances are unsatisfactory and unscientific. In open arthrotomy the fragments can be carefully approximated and sutured in such a manner as will maintain apposition and, ultimately, bony union. The operative method saves months of confinement, and gives permanent results. The buried suture material should be absorbable, such as catgut or kangaroo tendon. The field of operation should be continuously irrigated with a hot salt solution during the manipulation, and the incision closed without drainage. The massage treatment begun at an early date is an important factor in restoring the functional activity of the joint.

86. **Pneumonia in Children.**—Dickey recommends, in cases of pneumonia in childhood, the following treatment: Good ventilation; special attention to the clothing so as not to impede movement; nutritious and easily digested diet, given at stated intervals, and in concentrated form; plenty of cold water; moving the bowels in the beginning as an initial measure; special attention to the possibility of cardiac failure, strychnin being the best tonic, alone or combined with belladonna; temperature controlled as far as needed by hydrotherapeutic applications of water bags; in case of subnormal temperature, hot baths or hot packs with strychnia and digitalis. In case of delirium and high fever the ice-cap may be beneficial. As regards expectorants, he does not speak very strongly. Opium is to be avoided except when the cough is very harassing and interferes with rest. Pain can be relieved by external mustard applications. The internal remedies should be those that have germicidal or antiseptic properties, and will not depress the heart, and he thinks that salicylate of cinchonidia might, on theoretic grounds, be of advantage, but he has had no personal experience with it or other salicylates. In a few cases he has used creosote with apparent good results. He concludes with a brief mention of serum treatment.

88. See abstract in JOURNAL, July 8, p. 101.

96. **Disinfection in Typhoid Fever.**—Miner, noticing the prevalence of typhoid in North Dakota, describes the defects of sanitation along the course of the streams, especially the Red River of the North, where the same location is often the source of the water-supply and the drainage outlet. He remarks that the inhabitants of long residence along the river seem to have gained a certain immunity, but new-comers and children are very generally attacked.

92. **Bottini's Operation.**—Guitéras' paper is a very lengthy one, giving reports of twelve cases operated on by the Bottini method. In conclusion he discusses the indications of the operation at some length and states his belief that of all operative procedures so far devised for prostatic hypertrophy, this is the least dangerous and attended by the best results.

95. **Colles' Fracture—New Treatment.**—Rockey recommends, instead of the ordinary method of using splints that make pressure on the tendons and interfere with the circulation, lateral splints that prevent pressure of the flexor and extensor tendons, do not interfere with the circulation, and permit movement of the joints during the healing process. In his last case he used strips of pasteboard $1\frac{3}{4}$ inches wide and $2\frac{3}{4}$ long, made with four thicknesses on each side, and molded while moist, to the radial and ulnar margins, the palmar and dorsal surfaces of the wrist being entirely relieved from pressure by the thickness of the splint. Perfect reduction of the fracture is of first importance. He has used this method in twenty-five cases with good results.

98. **Tetanus Treated with Antitoxin.**—De Yoanna reports a case of tetanus coming on eight days after an injury, cured promptly by tetanus antitoxin injection. In all, 280 c.c. were given in fifteen days of treatment.

100. **Modern Therapy of Tympanic Cavity.**—Goldstein's paper is a plea for rather conservative methods in the treatment of middle ear disease. He thinks that frequent use of the syringe and lavage of the auditory canal is distinctly contraindicated in suppurative cases where large perforation of the drum exists, and where free entrance of the fluid into the cavity is so easy. He says they carry infection into the attic or antrum when none has previously existed. It should be our object also to extract fluid from the sodden, boggy surface of the cavity, and not to add to it. With a viscid, tenacious and copious discharge, a gentle current of a warm antiseptic fluid may be used to clear the canal to the surface of the drum, but beyond this point it should not be used. He is also opposed to the use of middle ear syringing in any tympanum affections other than in mild cholesteatoma. He has found a small tuft of sterilized cotton on the end of a probe, frequently renewed, a much better cleanser of the auditory canal than a large current of antiseptic fluid. If a small perforation exists, not passing the cotton tuft, he employs a nebulizing antiseptic fluid with the Eustachian catheter, thus driving it out and inflating and medicating the middle ear cavity better than could otherwise be done. His fluid consists of iodin, 3 grains; carbolic acid, 4 grains, and benzoinol or albolene, 1 oz. A slight insufflation of an antiseptic powder, preferably nosophen, completes the treatment. When the discharge is profuse, he adds a gauze packing to this treatment, using narrow strips of plain sterilized gauze. He thinks that oil sprays will soon gain the upper hand in the treatment of mucous membrane of the upper respiratory tract in the ear, and he describes his methods of using them. Where the Eustachian tube is impervious, as revealed by the auscultation tube, he employs an intratympanic injection made with puncture of the drum under antiseptic precautions, with the same formula as before, and he describes in detail his methods of doing this. Another departure of his own is the use of picric acid as a desiccator and antiseptic. It can be used with weak alcohol solution, thus avoiding pain, or with glycerin. In concluding his paper he speaks of the use of cimicifuga in the treatment of tinnitus aurium. In his experience, only about 5 per cent. of patients thus treated were benefited.

102. **Odd Types of Disease.**—Pearce's article points out certain peculiar phases of tabes, myelitis, cerebrospinal palsy, chronic anterior poliomyelitis, brain abscess, cerebral edema, and traumatic neurosis. The details can hardly be given here.

103. **Typhoid Without Intestinal Lesions.**—The paper by Lartigau gives full reports of two cases, with autopsy, in which the characteristic lesions of typhoid were not met with. The clinical picture in one was characteristic, and in both bacteriologic examination revealed the typhoid bacilli. In the second case, which was operated on for ectopic pregnancy, there was also streptococcus and pneumococcus infection.

104. **Malignant Disease of Digestive System.**—Noticing the general features of cancer of the digestive tract, Einhorn lays down the following as guides to their recognition:

Esophagus and Cardia.—Gradually developing dysphagia and the presence of a stricture in the esophagus, especially if a particle of tumor showing the characteristics of cancer has been brought up with the tube, or the above symptoms, with frequent small hemorrhages, make the diagnosis of malignant disease positive.

Stomach and Pylorus.—1. If particles of tumor are found—in the wash water or in the tube—which under the microscope reveal the characteristic picture of a malignant growth.

2. The presence of a more or less large tumor with an uneven surface, belonging to the stomach and associated with dyspeptic symptoms.

3. The presence of a tumor associated with frequent hematemesis.

4. Constant pains, frequent vomiting, ischochymia, emaciation—all these symptoms being quite permanent and not extending over too long a period of time (six months to a year.)

5. Tumor and ischochymia.

6. Emaciation, ischochymia, presence of lactic acid.

7. Constant anorexia and pains, not yielding to treatment,

accompanied by frequent small hemorrhages of coffee-ground color.

Small and Large Intestines.—1. If by abdominal or rectal palpation a tumor can be detected which is situated in the small or large bowel, and accompanied by symptoms of cachexia and disturbances of defecation.

2. The presence of a tumor as just described, and the discovery of small particles of the neoplasm in the evacuation giving microscopically the appearance of a cancerous growth.

3. Gradually increasing disturbances of the bowel for a few months in a heretofore healthy person, accompanied by cachexia and symptoms of a beginning or already developed stricture of the bowels, and the presence of a small particle of growth in the stools giving, as above, microscopically, the picture of cancer.

He also gives the following general rules as to operation: 1. Whenever the tumor is accessible for operation, and there is the slightest hope of curing the patient, the complete extirpation of the growth should be performed. 2. If the tumor is not accessible for operation, or the entire removal of the malignant disease is practically impossible, palliative operations which serve to alleviate suffering and prolong life should be undertaken in cases requiring them. 3. Cases of malignant disease operated on, as well as those without operation, require for their treatment and management a skillful physician, who is able to lessen suffering and nearly always able to lengthen life, even under the most trying conditions. Cancer of the esophagus and cardia does not at present permit any radical operation. When the patient cannot take food, gastrostomy is indicated. Cancer of the stomach and entire intestinal tract should be removed if discovered sufficiently early. Practically the outlook for the cure of malignant disease of the intestinal canal becomes less encouraging the farther away from the anus it is situated. Cancer of the lesser curvature of the stomach and posterior wall is usually recognized too late for radical operation, and if the cardia and pylorus are not involved, only the usual palliative remedies should be resorted to. Cancer of the rectum, when recognized early, has by operation afforded brilliant results. With the tumor higher up in the intestines, its excision and resection of the intestines with end-to-end anastomosis is advised. Where total resection is impossible and enteroenterostomy or enterocolostomy, or, if in the rectum, a colostomy, will be advisable palliatives.

105. See abstract in JOURNAL, June 17, p. 1390.

107. **Glycosuria in Cerebral Hemorrhage.**—Gradwohl reports three cases of temporary glycosuria in connection with cerebral hemorrhage, in two of which it was due to direct pressure on the diabetic center in the fourth ventricle. In the other, where there were no local lesions at these points, the general condition of cerebral pressure will, in his opinion, account for the condition.

108.—See abstract in JOURNAL, July 1, p. 37.

109. **Headache and Asthenopia.**—Cobb reports 3 cases of headache due to nasal disease, and comments on them. He thinks that many patients have headache from chronic rhinitis, with a viscid dry discharge which is due to uricacidemia and high living. Another form is caused by hypertrophy of the posterior third of the nasal turbinate. This form is not at all rare. In conclusion, he says: I wish to emphasize the following points: 1. Headache may be and often is caused by intranasal disease. 2. Other diseases, aside from atrophic rhinitis, nasopharyngitis, affections of the accessory sinuses or the obstructive intranasal conditions may be the cause of headache. 3. An examination of a patient suffering from headache is not complete unless the condition of the nasal cavities has been investigated.

111. **Serum Treatment.**—Bigg's paper is concluded in this number. Having already noticed the brilliant results in the treatment of diphtheria by antitoxin, he reviews the facts as regards the serum treatment of pneumonia, in which the experimental results have been very striking, and he thinks it not improbable that the next great achievement in serum therapy will be in the treatment of this disease. He also notices the good results of cholera and plague inoculations and Wright and Semple's prophylactic inoculation for typhoid. As regards the yellow fever serum and serum therapy in streptococcic infection, he does not speak with such positive encouragement. Leprosy and tuberculosis he throws out altogether, as regards treatment by this method.

113. **Peritonsillar Abscess.**—Cobb's paper concludes as follows: The whole number of cases examined was 44. 1. No causative relation could be proved to exist between rheumatism and peritonsillar abscess. 2. An acute inflammatory condition to the tonsil was found to exist in a sufficient number of cases to suggest that it may be the cause of the infection to the peritonsillar tissue. 3. A study of the pharyngomaxillary space shows: *a*, that its injection with wax on the cadaver may produce an appearance similar to the peritonsillar abscess as seen clinically; *b*, that its distance from the surface of the palate may account for the depth of the puncture often needed in order to obtain pus; *c*, that the cross action of the muscles covering the space seems a sufficient reason for the closure of puncture made into it; *d*, that the supratonsillar fossa and the infratonsillar space offer the space for puncture most free from anatomic obstruction; *e*, that puncture anterior to a plane passing through the posterior pillars can not injure the great vessels if the knife be kept at all times anterior to such plane; *f*, that the space is divided into two cavities by a septum formed by the styloglossus and stylopharyngeus muscles. This in most cases protects the great vessels from purulent infiltration. Failure of this septum to act explains the cases cited by Bosworth where the pus passed along the great vessels into the mediastinum.

114. **Normal Salt Solution in Septicemia.**—Edson reports a case of septicemia apparently starting from tonsillar infection, in which the use of normal salt solution injected into the subcutaneous tissues was resorted to after the patient had gotten into a desperate condition. The use of this solution was immediate in its good results, relieving pain, quieting delirium, and improving the pulse, and his cure may be said to have started from its first employment. Another noticeable feature was the ease with which large amounts of the solution were absorbed.

115. **Acromegaly.**—After reviewing the subject of acromegaly, Lackey reports a case presenting some unique features occurring in a colored male, who enjoyed average strength and health up to the age of 13. About this time he suffered with excruciating pains in the hip-joint and extremities, and was confined to bed for a period of two years, during which time the extremities increased rapidly in size, the stature also. Thirst was a constant symptom. The general nutrition of the patient was poor. Since the confinement locomotion has been impossible excepting by the aid of mechanical support. The patient is now 28 years of age; the extreme height of 8 feet 6 inches is recorded; the patient's face is repulsive, oval in outline, the lower jaw very much increased in size and length, the forehead extremely low with a thickened orbital border; the eyes small; the temporal bones indented; the nose long, large and much flattened; unlike most cases of acromegaly, the lips are thick and very prominent. The case presents special interest, in that it is undoubtedly one of the so-called giant forms of acromegaly, the enormous height being due to the lengthening of the long bones, the smaller bones of the hands and feet were found much enlarged. The heart showed hypertrophy. Spinal curvature was observed. The mentality of the patient is unimpaired.

116.—See abstract in JOURNAL, June 10, p. 1313.

117. **Corpuscular Phosis and Aphosis.**—Describing the phenomenon, Gould suggests that a day not too bright be selected, the sky filled with gray to bluish clouds. Shade the eyes with the hands, and, narrowing the palpebral borders until the aperture is about the width of the pupil, gaze steadily toward the clouds, but vacantly, i. e., without any accommodation whatever. Without winking, hold the eyes perfectly still. Within a number of seconds the field will be filled for 180 degrees, laterally, with innumerable darting points of light—phosis—moving, disappearing and reappearing in all directions without order and with great irregularity. A tinted lens being introduced, the number of bodies is reduced, but the remainder have the same general character and rate of movement. The reduction in number he describes as being due to the accommodation and fixation almost necessitated by the different lighting of the corpuscles, and the fact that but a single eye is used. By using a large piece of cobalt-glass over both eyes, and looking to a brightly sun-lit white

cloud, the aphoses are more numerous and fill a larger expanse of the field than when a single eye is used. In this way the two classes of sensations are recognized as due to the same object or causes of retinal origin, and he considers that the corpuscles are not seen directly, nor by means of the shadows they throw on the retinal end organs, but arouse sensations only when they reflect and focus on an incident beam of light on an unaccustomed and sensitive portion of the retina; and therefore expresses the firm conviction that these bright points —phoses—and the Newton aphoses are all due to reflections from corpuscles of the retinal capillaries, varying in appearance according to the method of observation and the illumination; thus differing from the conclusions of Willetts, who considered that they originated in the cornea.

118. **Post-Appendiceal Abscess.**—In reporting this case of abscess posterior to the appendix, discharging through the umbilicus, refilling and causing perityphlitis and general peritonitis, Friend explains the discharge of pus through the umbilicus by presupposing a patulous vestige of the vitello-intestinal duct, and that the infection which came from the intestine first involved this duct. The abscess cavity filled and the pus followed the course of least resistance, viz., through the umbilicus. The general infection was probably due to obliteration of this exit.

119. **Horseshoe Kidney.**—One weighing 14 ounces is reported as a finding in posting a patient having met with a violent death in her 45th year. The organ lay at its normal height, with convexity downward, close to the spinal column and symmetric as to the two sides—measuring fifteen inches from the highest point of one extremity to a corresponding point on the other. The pelves and ureters were intact. The connecting band was composed of true renal tissue and measured 3½ inches in circumference.

120. **A Mechanical Laxative.**—Liquid petroleum is recommended as a mechanical laxative, in quantities of from two to three ounces. Upson considers it absolutely non-irritating, that it does not distend the bowel, nor cause flatulence; indeed, diminishes it, and is easily taken, even by children.

122. **Irritation-exostosis.**—Bradford shows, by a series of skiagraphs, the more common locations in which are found the various exostoses due to irritation about the small joints of the feet. The parts where irritation from bone pressure or shoe external irritation takes place are those positions of the foot where the strain is greatest and the bone is less protected by fat, commonly the first and fifth metatarso-phalangeal articulations, and at times at the dorsal-surface articulations of the cuneiform and first metatarsal, and on the dorsal surface of the head of the first metatarsal bone, and on the prominent portions of the posterior portion of the os calcis.

123. **Case of Syphilitic Fever.**—In the case recorded, diagnosis was extremely difficult, and a study of the febrile course shows an average evening rise to about 101.6 degrees, with a morning fall to below normal. Attention is called to the value of a study of the pulse in doubtful febrile cases; slight variations of the pulse are at least suggestive of specific fever.

124. **Antistreptococcic Serum in Puerperal Fever.**—In treating these cases, besides the use of serum, Rosenthal advises a douche of sublimate, 1:8000; lysol, 2 per cent.; or creolin, 5 per cent.; curettage, with iodoform packing, which is removed after twenty-four hours. Purgatives and stimulants are to be selected, while the serum is used in quantities of 10 c.c in initial doses, repeating the dose on the following day if fever continues, and gradually diminishing the quantity injected. Several cases are reported in which the antistreptococcic serum was used; the writer reports a mortality of 25 per cent.

126. **Angioneurotic Edema.**—The condition appeared in a female of 35, who had enjoyed average health. She first noticed a swelling of the right side of the face, appearing suddenly; no pain, tenderness, or pitting was present early, nor was itching or heat complained of; disappearing in twenty-four hours to reappear again on the wrist and various other portions of the body for weeks. The condition continued to involve various portions of the body, extending over larger areas, especially selecting the face and loose tissues of the neck; burning, itching at times; redness developed as the condition progressed; twice during the six months did the edema extend beyond the pharynx, the patient becoming cyanotic and complaining of great distress in the chest; venesection relieved the symptoms at these times. Eventually the patient died of an internal hemorrhage.

127. **Arsenite of Copper in Cerebrospinal Meningitis.**—Kolipinski reports four cases of epidemic cerebrospinal meningitis which he treated by the following method: 1. Quiet, excluding from the sick-room as much as possible, friends, light and sound. 2. A simple milk diet with drinking water whenever desired. 3. Daily movement of the bowels by enema or castor-oil. 4. The arsenite of copper for the first and second days, every half hour when the patient was awake. With improvement in symptoms the intervals were prolonged to every one or two hours on the third day, and every three or four hours on the fourth day, and the remedy was discontinued when convalescence began to appear. With children he uses about 1/2400 to 1/1200 of a grain a dose, with the adult 1/320.

FOREIGN.

British Medical Journal, July 15.

Case of Freidreich's Hereditary Ataxia with Necropsy. GEORGE E. RENNIE.—The author reports a case of Friedreich's ataxia, with autopsy findings, in a boy aged 13 years. The lesions found were well-marked degeneration of the posterior columns throughout their whole length, in the posterior root zone, and also of a large number of posterior root fibers; much less marked degeneration in the lateral columns in the region of the crossed pyramidal tracts; scattered marginal degeneration at different levels; distinct degeneration of the direct cerebellar tract with atrophy of Clarke's column. The findings, therefore, agree quite well with those usually met with, but it is interesting to note the extent of the lesions, though the duration of the disease was stated to be only about fifteen months. The disease, therefore, is apparently a primary nervous derangement grafted on an imperfectly developed spinal cord, the imperfect development being due to unknown hereditary influence. In conclusion, the author calls attention to certain features in the clinical picture, such as the absence or rarity of sensory disturbances, lack of sphincter troubles and the condition of muscular hypotonia present in the majority of these cases.

Contribution to Study of Posterior Columns of Spinal Cord. HAMILTON WRIGHT.—This article is a discussion of the findings of the autopsy in a case of tabes, with special reference to the nerve tracts of the posterior column. The author discusses the findings with special attention to the course of what are considered the intracordal or endogenous sections. He concludes that the Marie cornucommissural zone, Flechsig's median triangle and postero-internal root zone are of true intracordal origin, at least as regards the majority of their fibers. The comma tract of Schultz was found in a state of almost complete fibrosis, which he explains as probably due to an anatomic connection with Clarke's cells, and generally close association with the vesicular cylinders.

Some Points Connected with Sleep, Sleeplessness and Hypnotics. JOHN BUCKLEY BRADBURY.—Bradbury discusses the chemistry and physiologic action of some of the derivatives of morphin, cannabis indica, hyoscin and anhalonium, and concludes with remarks on the treatment of insomnia. After noticing the causes, toxic, psychic, and those due to changes in the mode of life, he mentions the special and general measures for its relief. In ordinary cases of insomnia, uncomplicated, he would first try the bromids as least harmful. He notices the requirements as to sleep-places, diet, etc., and then specifies special drugs for particular cases. [In the main his suggestions are much the same as those found elsewhere.—Ed.]

Treatment of Malarial Fevers by Inunction of Creosote. A. O FITZGERALD.—This article contains the report of classified cases of malaria treated by inunctions of pure beechwood creosote over the chest, abdomen, axillæ and sides, 15 to 20 minims for a child of one year and 30 to 60 minims for an adult, mixed with an equal quantity of olive-oil, the latter being employed to counteract the tingling and burning occasionally produced by the creosote. The results as reported in his tables are certainly remarkable, and he mentions some of the cases in detail. He thinks it is an ideal treatment in malarial fevers in children and he has never seen any bad effects in any case. It seems to be also equaliy effective in adults.

Lancet, July 15.

Observations on Tuberculosis and Syphilitic Diseases of the Eye. LACHLAN GRANT.—The author calls attention to the comparative rarity of tuberculous disease of the eye, and offers the following as probable reasons for the facts: 1. The eye is exposed to much bright sunlight, which is fatal to the bacillus of tubercle. The movements of the eyes and eyelids tend to dislodge the bacilli, and the secretions also favor this action. He thinks there is also something in the construction of the surface tissues of the conjunctiva and cornea, which is hostile to bacilli infection. Another means of defense is the phagocytic destruction of the bacilli and he concludes that the organ may be considered naturally immune to tubercle, thus resembling the pharynx, thyroid body, pancreas and ovary. In striking contrast with this immunity is the relative liability of the eye to be attacked by syphilis, the virus of which seems to circulate throughout the entire system, probably finding in all non-syphilitic individuals a suitable nidus for its development.

Muscular Hypotonia in Epileptics. GEORGE E. RENNIE.—Three cases of epileptics are reported in whom there was a noticeable flaccidity of the muscles as one of the symptoms. The subjects were those in whom the disease had existed a long time, with very frequent fits and no long intervals of freedom. There were also in all three marked mental deterioration, and they were all young. He concludes that in this class of epileptics there may be a more or less permanent interparoxysmal muscular hypotonia due to a state of exhaustion of the cortical motor cells.

Anthropological Work in Asylums with a Practical Scheme for Conducting the Same in Adults. EDWIN GOODALL.—The degenerative stigmata in the insane have lately been noticed by various writers, especially Schmidt, Meyer, and Peterson, and Goodall here offers a scheme of anthropologic work in asylums. The chief objects of such a research in his opinion are: 1. To show whether these stigmata are more common and more numerous in the insane—apart from cases of obvious congenital defect—than in the sane. 2. To make a division into grave and slight stigmata by ascertaining which are commoner in the more depraved types of insanity, and which in the more hopeful. 3. To ascertain whether there is such a frequent recurrence of particular stigmata in particular forms of mental disorder as to justify a correlation. 4. To ascertain the relationships between the number and nature of the signs and the degree of inheritance of neurotic disorder; where such inheritance is denied, or where the history is difficult to ascertain, a study of the physical condition may be expected to give useful information as to inheritance. 5. To obtain a guide in prognosis in persons where history raises the apprehension of mental disorder and in those who have become insane; where the insanity has supervened in an individual said by his relatives to have been previously normal, and some accidental cause for the disorder is assigned, the discovery of physical stigmata may materially alter the prognosis. The normal measurements should be made from the same population of the district supplying the patients to the asylum, which, though difficult in places where there is a large and changing population, would be comparatively easy in others.

Journal of Laryngology, Rhinology and Otology (London), July.

Hysterical Aphonia and Ventricular-band Speech. MIDDLEMASS HUNT.—The case here reported is that of a Jewess, aged 27, who, from a nervous shock experienced in attending an Irish wake, completely lost her voice and did not regain it up to the date of being seen, excepting on one occasion when under the influence of ether, and then it was only retained for two hours. Laryngoscopic examination showed the ventricular bands brought close together on attempted phonation, hiding the ligamentous glottis almost entirely, but it could be observed that the vocal cords were wide apart. All efforts to restore her voice failed, but a gradual improvement took place within the last two or three years until she came to talk in a deep, rough but fairly powerful voice. The laryngoscopic picture remained unchanged. On phonation the ventricular bands were seen to come tightly together and vibrate, while the glottis, so far as it could be seen, remained open. The voice was evidently due to ventricular band vibration. No change occurred, and hope of restoration was abandoned until one day last September she returned with perfect voice, it having been restored to her by a nervous shock on seeing a man thrown down stairs into the street and so severely injured that he died shortly afterward. Laryngoscopic examination showed the vocal cords closing normally, but still considerable hypertrophy of the ventricular bands. Hunt asks in what proportion of cases do we find closure of the ventricular bands on attempted phonation in hysteric loss of voice? He can recall only one other case, and did not find it described in the text-books, though Treupel says it is not uncommon, and regards it as a transition form of neurosis between splastic and paralytic aphonia. Hunt asks, is this view correct, and is not the approximation of the ventricular bands in hysteric aphonia rather an effort of nature to make them take the place of the paralyzed cords, as we see in cases where these latter have been destroyed by disease?

Bulletin de l'Academie de Medecine (Paris), July 4.

Malarial Aortitis. LANCEREAUX—In this communication 21 cases of a special variety of aortitis, occurring in patches, are added to 16 previously reported. Some were accompanied by an aneurysm, angina pectoris, dyspnea or dysphagia, and terminated by rupture of the vessel or suffocation, or more slowly from cardiac insufficiency, unless the lesion was arrested and cured. Lancereaux ascribes the aortitis to malarial infection, and insists on the importance of watching over a malarial subject, as the first acute stage, more or less intermittent and transient, is followed by a phase of sclerous and persistent lesions, frequently mistaken for syphilitic. Hydrotherapeusis is beneficial, also potassium iodid if the lesions are not too far advanced. He reiterates that he has found gelatinized artificial serum extremely successful in obliterating the aneurysmal sac, injecting 250 c. c. of a 2 per cent. solution into the buttocks every fifth to eighth day, confirmed by the experience of the Bucharest professors among others. [A. Fraenkel has also recently reported another severe case cured.—ED.] The ascending portion of the aorta is usually the site of the lesion, which in some respects anatomically resembles the invasion of the frontal nerves in syphilitic periostitis of the skull.

Report of Delegates to Tuberculosis Congress.—The fact was especially emphasized that a condition indispensable to the success of sanatoria for the poor is the support of the family while the breadwinner is in the sanatorium; also that no patients should be admitted to the suburban sanatoria except those in the pretuberculous stage, before the appearance of bacilli in the sputa. Those with "open lesions" should be received and relieved as far as possible in the hospitals. "As many sanatoria for the people as are opened, just so many hospitals will be closed in the near future." "The rich, by founding and endowing sanatoria will protect themselves, their children and future generations against the white scourge, as the number of cases progressively diminishes."

Revue de Chirurgie (Paris), July 10.

Creation of Cleido-Humeral Nearthrosis. OLLIER—The entire scapula and the upper end of the humerus had been removed, on account of a gunshot wound received at the siege of Metz, leaving the arm hanging loose with a deep depression instead of a shoulder. Ollier attached the humerus to the clavicle by a couple of silver wires, raising and shortening the arm 6 cm., but restoring almost complete function. A supple but very resistant fibrous tissue has developed, forming a peripheral capsule and ensuring the solidity of the nearthrosis. Radiographs show that the support does not now depend on the wires, which might possibly be removed. The subject can lift a weight of 57 kilograms with this arm, and the outline of the shoulder is normal. This case has been reported before (JOURNAL, xxxi, p. 429), but the extremely favorable functional results secured induced Ollier to describe it in detail, and insist on the principles of the disinsertion of the muscles accidentally displaced or abnormally attached, and their reinsertion on the bone which they can then move normally. "As long as the muscles are not entirely atrophied, as long as normal conditions of the nerve persist, it is possible by restoring normal relations to hope for a successful reestablishment of part of their functions. A pseudoarthrosis swinging loosely can thus be replaced by an actual articulation, endowed with active movement, and adequate resistance, if intervention occurs before the muscles

have become degenerated, and it is still possible to find the elements for a new capsule in the peripheral fibrous tissues."

Post-Anesthetic Paralysis. MALLY—"Hysteric and reflex paralysis occurring after an operation do not seem to have any connection with the anesthesia. Central paralysis from cerebral hemorrhage is a rare accident, evidently due to a vascular rupture mechanically produced by the anesthetic, but peripheral paralysis is a comparatively frequent complication, always caused by compression, and the anesthesia is only indirectly responsible, as it favors the involuntary and accidental compression of the nerve trunks of the roots of the brachial plexus. It is impossible to establish any toxic or depressing action of the anesthetic on the nervous system. Treatment of post-anesthetic paralysis should be preventive, avoiding forced elevation of the arms, and watching to see that the edge of the table or a ligature does not cut into the members or tissues. Local faradization, as soon as possible, is indicated in paralysis from compression, and passive movements of the articulation to prevent stiffness. If the electric tests disclose degenerative atrophy or severe reflex paralysis, localized electric treatment is counterindicated. In the latter case the reflex medullary irritability should be soothed with static electricity, and possibly revulsion on the spine with spark friction."

Wounds of Pericardium and Heart. E. LOISON—This tabulated description of fifty-four cases, concluded from the numbers for January, February and June, aims to establish that the prognosis is not necessarily unfavorable, that many cases have been successfully operated on, and that intervention might have been far more active than it was, as in many instances the results or autopsy findings demonstrated that surgical treatment would have been possible and would have had every chance of success. The symptomatology is no more uncertain than in cases of wounds of the peritoneum or of certain abdominal viscera, and the diagnosis is no more difficult or delicate.

New Method for Resection of Gasserian Ganglion. O. JACOB—Experiments on the cadaver have convinced Jacob that the simplest and easiest route to reach the Gasserian ganglion is by following up the superior maxillary nerve to the foramen rotundum. The external surface of the base of the pterygoid apophysis serves to locate the foramen, as it separates the round from the oval opening. This method includes resection of a part of the external wall of the orbit to expose the superior maxillary, which opens a large field for the operator, and much shortens the route. The steps of the operation are first to find the superior maxillary and to follow it to the base of the skull; then trephine the skull and seek the ganglion, isolate and extirpate it, and replace the osteoplastic flap. The incision is circular, commencing a finger in front of and above the tragus, fitting around the orbit, and continuing the circle around to a point in front of the upper portion of the ear.

Semaine Medicale (Paris), July 13.

Biliary Lithiasis, Suppurative Cholecystitis and Persistent Infection of the Biliary Passages. RENDU—A case that had been under observation for a long time, and twice been operated on, still gave evidence of latent, persisting infection, and Rendu sketches the treatment appropriate in such cases: 1. Evacuate the bile with light mineral purgatives, such as sodium sulphate. Calomel is also effective, and glycerin. Follow with mineral waters, Evian, Vittel, rather than Vichy, which does not produce a sufficiently laxative effect in this late stage. The secretion and fluidity of the bile are increased by administering 2 to 3 grains of sodium salicylate a day, or 25 to 30 centigrams of salol. The meals should be far apart, regular and not too abundant, with a little starch, meat, fat or substances rich in cholesterin, such as brains and the yolk of eggs. Green vegetables and fruits are the principal reliance, avoiding effervescent and alcoholic drinks. Plenty of exercise, out-of-door life, and cutaneous stimulants, baths and frictions, are also to be recommended.

Journal d' Hygiene (Paris), July 13.

High Frequency Currents in Therapeutics of Arthritism. G. APOSTOLI—An experience with 913 patients during the last five years, treated with d'Arsonval's application of the high frequency currents, confirms their efficacy as a therapeutic measure which acts on the cell itself, and powerfully modifies the general nutrition, promoting and regulating it. The clinical results are almost constantly progressive restoration of the general health, as strength, appetite, sleep, digestion, cheerfulness and capacity for work return. Tests of the urine of 469 patients showed increased activity in the organic combustions, improved diuresis and easier elimination of the excreta, while the proportion of uric acid tends to return to normal. The high frequency current is a powerful weapon against arthritic neuralgia, neurasthenia, dyspepsia, eczema, vascular congestions, and all other manifestations of arthritism, by the preventive and curative effect of general applications, combined with local for hemorrhoids. It is counteriadicated in acute rheumatism, but may be beneficial in the subacute stage, and is almost invariably effective in the chronic forms, as also in gout, although it may induce a fresh outbreak in certain cases when first commenced. The static current, on the other hand, is most effective in hysteria.

Centralblatt f. Chirurgie (Leipsic), July 15.

New Operative Treatment of Varicose Ulcerations of Legs. N. BARDESCU—The latest views of the phlebo-neurotrophic origin of varicose ulcerations indicate that besides the alterations of the vessels, the lesions of the nerves require treatment, and Chipault has confirmed the writer's experience that stretching the nerve is an important factor in the cure. Two observations are related, both severe chronic cases that had resisted all treatment for four to eight years, one with gangrenous detritus. Both were completely cured in about a month, by resecting the vena saphena magna with cocain or eucain anesthesia, and ten days later stretching the nervus peroneus communis behind the head of the fibula, under chloroform, separating its fibers with the point of the bistoury to destroy the varicose vessels of the nerve as much as possible. In future operations he intends to complete the intervention at one sitting.

Triple Bladder. A. STRAUSS—This is an observation of a man of 29, complaining of intolerable desires to urinate, and incessant incontinence, and operated on, with the result of the discovery of two supernumerary bladders in front of the main bladder debouching in the prostatic region, and of the typical bladder shape, about one-fourth normal size, but without connection with the ureters.

Deutsche Medicinische Wochenschrift (Berlin), July 13.

Fatal Acute Nephritis in Consequence of Intoxication with Wood-Sorrel. H. EICHHORST—Notwithstanding the prevalence of the custom of nibbling wood sorrel, and using it for salads, as is done in Germany, intoxication from the oxalic acid has never been noted with absolute certainty, although a veterinarian has reported a horse succumbing to it with inflammation of the stomach and convulsions. In the case described in this communication a boy of 12, after eating a large quantity of sorrel as he played in the fields, became affected with violent colic and diarrhea. The next day the right kidney region was sensitive to pressure, with 12 per thousand albumin in the urine; no fever; the fifth day unconsciousness, clonic contractions of the right arm and eyeballs twitching from right to left, pulse 84 to 92; no previous scarlet fever, received at clinic on seventh day; no oxalate crystals detected in urine; respiration ceased the eighth day, but the heart continued to beat for three-quarters of an hour longer.

Glycosuria in Intoxication from Atropin. F. RAPHAEL—An accidental intoxication with atropin induced spontaneous glycosuria: 1.8 gram dextrose in the urine the first morning and afternoon—patient a merchant 28 years old—and tests with grape-sugar ingested, showed that 13.2 per cent. was eliminated, indicating not merely a *glycosuria e saccharo*, but also an *ex amylo*. Experiments with rabbits also proved that the ingestion of an appropriate amount of atropin produced glycosuria four out of five times.

Mitteilungen a. d. Hamburg. Staatskrankenanstalten, ii, 2.

Dementia Paralytica Appearing in Boy of 12 as Sole Manifestation of Hereditary Syphilis. NONNE—The etiology of the case reported is "pure," no alcoholism nor trauma, in which respect it is unique, also in the rapid course of the progressive simple dementia, free from the phases of depression and excitement common in adults.

Infection by Diplococcus Lanceolatus. J. WIETING—Nine cases are studied and the paths of the infection traced to the blood and lymph routes, the focus determined by some pre-existing trauma or thrombus, and the entering point assumed to be some lesion too insignificant to have been noted, in the cases called primary. In one case, a girl of 8, prompt recovery followed the evacuation of an enormous suppurative cavity occupying both small and large pelves. In two cases of croupous pneumonia in men of 44 and 53, the knee was affected, and a third case, a child, died from pyemia produced by mixed infection with the staphylococcus aureus, which was found pure in an abscess in the hip. A fourth case of croupous pneumonia in a man of 29, three days after a fall down a few steps, was followed by suppurations in three joints, finger, toe and knee, in which the diplococcus was found pure at the autopsy. This case is an exception to the general experience that localized infection with the diplococcus alone is usually a benign affection. When combined with pyogenic microbes the diplococcus is usually soon destroyed, leaving the entire field to its partner. An interesting case is a workman of 60, under treatment for a fractured rib and slight emphysema of the lung, who developed an abscess in the epididymis in which the diplococcus was found pure with evidences of an old thrombus formation in the vessels. Complete recovery followed evacuation.

External Anthrax on Man. JUSTI—Sixteen cases are described, with five deaths, in which the results of conservative and operative treatment are compared, very much to the disadvantage of the latter, emphatically confirming C. Mueller's statement that the only effective treatment of anthrax pustule, especially on the neck, is to leave it entirely alone, and merely protect it from secondary infection. The patient must remain in bed, with exceptionally strengthening diet, and the extremities, raised in certain cases.

Wiener Klinische Wochenschrift, July 6 and 13.

Third Case of Tetanus Traumaticus Cured by Injections of Emulsified Brain Substance. A. KROKIEWICZ—Forty grams of rabbit's brain substance were injected in all, emulsified in a 0.6 per cent. aqueous salt solution, in the region of the pectoralis major, in the course of three days, the patient, a man of 35 years of age, in violent tetanus. The effect was remarkable from the first, and complete recovery soon followed, as in the two other cases reported. All medication had proved ineffectual, and was suspended after the injections were commenced, the ninth day of the disease.

Noma Faciei. F. PASSINI—An extensive case of noma is described in which the Loeffler bacillus was found and extremely virulent, evidently an important factor in the etiology.

Case of Morbus Addisonii with Preceding Purpura Hemorrhagica. F. VOLLBRACHT— This careful study of a case at Neusser's clinic, the metabolism also investigated, presents a peculiar clinical picture: patient first appeared with purpura hemorrhagica which had commenced with cramps in the abdomen, then pain in the region of the right kidney, albuminuria and transient hematuria; recovery; no relapses. She returned eleven months later with classic morbus Addisonii, improved with suprarenal extract for six weeks, then nausea, vomiting, lethargy, and in five days fever, convulsions and delirium, with death the seventh day, evidently caused by irritation of the brain from cerebral hyperemia with consecutive edema of the brain. Both suprarenals were almost completely destroyed, and this destructive process must have existed before there were any clinical indications of morbus Addisonii—merely the purpura.

Societies.

French Congress of Urology.—The fourth annual meeting of the French Association of Urology will be held at Paris, October 29 to 31. Secretary, M. E. Desnos, 31 rue de Rome. "Essential Hematuria" is the subject announced for discussion.

Crawford County Medical Society.—At the recent meeting of this society, held in Robinson, Ill., the following officers were elected: President, C. E. Price; vice-president, H. F. Jones; secretary, John Weir; treasurer, C. Barlow. The next meeting will be September 14.

Wabasha County Medical Association.—At the annual meeting of this Association, held in Wabasha, Minn., July 13, the following officers were elected: President, E. H. Bayley; vice-president, J. A. Slocumb; secretary and treasurer, W. F. Wilson. The next meeting was appointed at Lake City, July 19, 1900.

Proposed Leprosy Congress.—The program of the leprosy congress which Dr. Albert S. Ashmead of New York and Dr. J. Goldschmidt of Paris are organizing, to meet in Paris in 1900, announces the subjects for discussion as follows: 1. How to deal with leprosy. 2. How to protect hitherto non-infected Continental nations in their contact with infected nations. 3. How to avoid importation by sea. 4. Formation of an international committee to carry out the measures of the Congress.

Chicago Academy of Medicine.

Regular Meeting, June 23, 1899.

ANTENATAL ASPECTS OF CHILDHOOD IN THEIR RELATION TO ADULT DISEASE AND DEFECT.

DR. C. S. BACON—The antenatal factors which influence intrautine life may be divided into two classes: 1, the distinctly hereditary, which may also be called the terminal or conceptional, and 2, the postconceptional, or intrauterine, also often called the placental. The germinal factors include the ovular or maternal and the spermatic or paternal. The intrauterine factors are the nutritional and the protective, including in the latter mechanical protection and temperature regulation. Both classes of factors may be normal, causing a healthy development of the individual, or they may be pathologic. The normal factors determine the form of the individual, morphogenetic, the structure, histogenetic, and also the character formation. In the pathogenetic factors we especially consider those which cause malformations, due either to defects or excesses of growth, and also infections and intoxications.

The form, structure and character of the individual are dependent on hereditary factors, including both the ovum and sperm cell. I shall not discuss the laws which determine their influence, which are, to say the least, very indefinitely known. However interesting the hypotheses are that have been advanced by Weismann and others, we all admit that heredity is the most important element. In other words, the germs contain the fundaments or *anlagen* for the form, structure and character of the individual. We can not note in detail the variations of structure at this time, but we know that these variations of structure and of character are more dependent on the foundation in the original cells than on any other cause. However, the intrauterine factors should not be entirely neglected. The nutritional factors are important in determining, for example, the size of the child. The absence of food, and particularly a deficiency in the proper elements of food, have considerable to do with the intrauterine development of the child, and very likely have some influence on its character. Then we must consider the imperfect protection of the child. There are many things which aid in determining the production of malformations. We have a very good illustration in those rare cases of extrauterine tubal pregnancy where the child goes on to term and on account of the impossibility of proper development of the child and lack of room and pressure, considerable deformity results. We have an excellent example of the effects of pressure in determining the form of the child in the results of the experiments that have been made by certain investigators. Thus by certain experiments on animals a remarkable variation was shown in form when the egg was subjected to pressure. The insufficiency in the liquor amnii is an important element in certain malformations of the child, and the character may also be influenced through variations in its nutrition. Whether the child can be influenced either in its form or character by means of any mental impressions of the mother is so extremely improbable that it is hardly necessary to call attention to it. The popular belief in the effect of

maternal impressions is simply due to the fact that formerly this belief was held by the profession. Many of the cases cited as illustrations are hardly worthy of consideration because they have not been reported with any degree of scientific accuracy.

Having spoken of the form and character of the individual as determined by both the germinal and intrauterine factors, I will now speak of the pathogenic factors, and chiefly of the infections and intoxications. That there is such a thing as germinal infection, that is, an infection taking place in the ovule or sperm cells, is, I think, quite well established. The experiments that have been made by Baumgarten and others, for example, in infecting hens' eggs with tubercle bacilli, show that not only infection can take place, but the very interesting fact that the germs can remain latent for a long period of time, and explain the seemingly strange fact that an egg can be infected and not lead to abortion. That is to say, the tubercular germs can remain in a latent condition in the growing egg, and perhaps a long time after the fetal stage. These infections have been, so far as I know, brought about experimentally on the ovule alone. The possibility of infection of the sperm cells must rest on clinical evidence, although my knowledge of the literature on this point is not very extensive. Clinical evidence as it pertains to syphilis seems so convincing that we must admit that the sperm cells can carry the syphilitic infection to the egg without causing any infection of the mother.

As to infection during intrauterine pregnancy, our present state of investigation shows that it is not as common as was formerly thought. It was formerly a common idea that infection through the placenta was an extremely frequent occurrence. According to more exact observation in later times, germinal infection plays a much more important part than was formerly believed and placental infection is much less common. That there is such a thing as placental infection, for example, in the case of smallpox or of syphilis, is undoubtedly true. I shall not go over the large amount of work that has been done quite recently on this subject, but it seems to me the conclusions of Duering represent the best knowledge of the present time, viz.: 1. That in case of a healthy placenta infection does not occur. The healthy placenta is a perfect filter to keep the germ from the fetus. 2. Microbes may cause, in the placenta, hemorrhages, emboli, various destructive processes which destroy its filtering power, so that infection may occur later.

One other extremely interesting question is that of immunity or immunization, and the general question of intoxication or immunization of the child *in utero*. I am not speaking here of hereditary immunization or that due to germinal factors. It is necessary to premise that by immunity I allude particularly to what Ehrlich calls passive immunity. Ehrlich distinguishes between active and passive immunity, one being a condition in which the tissues are insusceptible to the germs; it is more or less a permanent condition. On the contrary, passive immunity means a condition in which there is present antitoxin or some substance which enables the system to withstand the action of the germs, but it is more or less temporary. That there may be placental immunization, as well as a placental intoxication, seems fully established. The placenta, as has been known ever since the investigations of Gusserow, and even before him, permits the passage of various substances in solution into the fetus, and these antitoxins or immunizing bodies are probably solid substances which pass through the placenta.

CHILDHOOD IN RELATION TO ADULT DISEASE AND DEFECT, which was considered from various standpoints, was the subject for discussion.

NUTRITIONAL ASPECTS.

DR. FRANK X. WALLS spoke on this topic. He said: In considering the nutritional aspects I shall confine my remarks largely to that part of nutrition which comes under the head of food assimilation. This is a phase of child study which deserves most serious consideration, because not infrequently problems of great importance come up that are very difficult for us to interpret. During the first years of life the child is in a plastic, impressionable state, and so far as we can do, we ought to guard the child against any external impressions which may mar it, as these impressions, when repeated, tend to become more or less permanent and may warp the physical and intellectual growth of the child. Of all factors that make up the environment of the child, food is the most important, and the question of food is one which we as physicians can influence more than any other factor in environment.

During pregnancy it is our duty to see to it in the interests of both mother and child that the mother is properly fed. Dr. Kiernan has reminded me that a few years ago a certain fruit diet was recommended for mothers during pregnancy, which might render their labors easy, that is, decrease the pain. He tells me that the evidence as to ease of labor was conflicting, but the testimony as to the condition of the child was not. The children were nearly always weak, pale, anemic, and soon subjects of arthrepsia. When a child is born it is very fortunate if it can obtain its nourishment from its mother.

We shall not consider the rules or instructions that should be given to the mother during nursing, but pass over them because of lack of time and consider briefly the condition of artificial feeding which presents problems of greater importance. Formerly physicians did not consider the subject of a suitable diet for infants as much as they should, but more recently in this country, through the efforts and scientific study of Jacobi, Holt, Rotch and others, we are becoming more active in this phase of child study. The child, we should remember, must receive an amount of food sufficient in quality and quantity not only to nourish it and to take the place of waste matter, but a surplus must be assimilated, so that it may have something on which to grow. We are all familiar with instances of immature children who perhaps with great care have been fostered and nurtured to the degree of considerable strength; and on the other hand, with children who have been born strong and robust, but who, under adverse conditions, soon became stunted and dwarfed in both mind and body.

Cheadle, in his excellent book on infant feeding, has summarized the conditions that the food for infants should conform to: 1. The food must contain the different elements in the proportions as they are present in human milk. 2. It must contain an antiscorbutic element. 3. The quantity of food in twenty-four hours must equal about one to three pints of human milk. 4. It must not be entirely vegetable; it must be made up in great proportion of animal material. 5. It must, in form, be suited to the physiologic conditions of digestion in infancy, and lastly, it must be free from all taint of decomposition.

Fresh cow's milk adapts itself to these requirements. Cow's milk we are to look on as a food for infants, not as a simple food, but as a complex food, that is made up of proteids, carbohydrates, fats, mineral matter and water in varying proportions. In administering such food to a child we should modify it according to the requirements of Cheadle, so that it will conform to the digestive functions of the child. In order to do this we must familiarize ourselves with the symptoms of excess or deficiency in each and every one of these ingredients of cow's milk. Having mastered this, we then can intelligently prescribe a milk for the child.

The diseases that may result from faulty food may be perhaps classified under three general heads: 1. We may have those diseases brought about by the direct irritation of the gastro-intestinal tract—the dyspepsias, gastro-enteritis, entero-colitis, etc. 2. We may have a group of diseases which are dependent on the absorption of toxic materials either introduced with milk or produced by the fermentation of milk in the gastro-intestinal tract. Lastly, we have the disturbances of nutrition which are brought about sometimes by an insufficient quantity of food, but more often perhaps by a want of some one ingredient of food rather than a lack in the total quantity of the food taken, a deficiency in the fats, proteids, or antiscorbutic elements, or whatever it may be. These diseases are classed under the head of anemias, atrophies, rickets, scurvy, etc.

This subject of food or nutrition in childhood, particularly in infancy, is one of the most important subjects that could be presented to us as physicians, and one that requires considerable study, much observation and experience, as well as

tact in its administration, and I think in proportion as we master this subject and carry the principles out in private practice, in like manner will we find the children improve under our care, and become strong and hearty—*mens sana in corpore sano*.

Dr. WILLIAM L. BAUM—The child, as Havelock Ellis has shown, prophesies a promise of advance rarely realized in maturity by either sex. Arrested development of this promise of the child type will result in masculinism and femininism. In the first, female organs and functions occur, but with greater or less male predominance. In femininism the reverse obtains. Femininism, with which alone I propose to deal, may be evident in gynecomastia, or in cryptorchidism, or sloping shoulders. The nervous system may be so distorted that at puberty the sexual instincts may be female in type. These may be expressed more in extreme modesty in type. These intense liking for female rather than male occupations. Often the sex side is quiescent until awakened at puberty. Sexual education at this time, rather than any inborn tendency, may give the sex direction. Male pseudohermaphrodites—brought up as females—often display unusually womanly qualities, are married, live happily, and die ere their real sex is discovered. While, as just pointed out, the mental state of the pseudohermaphrodite may be that of the sex to which it is assigned, still to this there are more exceptions than adherence. Neugebauer (*Contralblt. f. Gyn.*, May 6, 1899), among 653 cases found 50 marriages between members of the same sex, 46 marriages between two men, and 3 between 2 women. This occurs more frequently among males, because the pseudohermaphrodites are much more frequent than the female. In the statistics collected there were 437 males, 125 females, and 11 individuals whose sex could not be determined. The results of these marriages were invariably unfortunate, leading to divorce, suicides, unhappy family relations, and even murder. Neugebauer is of the opinion that these occurrences are more frequent than statistics show, but are kept quiet for fear of unpleasant publicity. It is not an uncommon occurrence for marriages to be interrupted at the last moment because of the discovery of the hom-sexuality of the engaged couple. He impresses on the physician the necessity of careful study of pusedohermaphroditism, since a single word from him can avert these unhappy avents. A careful examination in a majority of cases will reveal a hypospadiasis peniserotatis with a rudimentary vagina.

Neugebauer, however, ignores the sexopsychic training, which is as important as the malformation. Sensual experiments by tribadic relations with females might develop the male mental state in seemingly feminine male pseudohermaphrodites. As these would be likely to occur during puberty (15 to 25), the mind would then be peculiarly plastic to their influence. The sexual appetite has its origin in all probability in a desire for satisfying protoplasmic hunger. Its differentiation is late, hence the production of abnormalities in it result from training as much as in an inborn tendency. The influence of the sex perversions, inclusive of perversions proper, inversions and perversities on sociology, is much greater than would be assumed from the prurient prudery with which the subject is discussed. As has been already shown and is well remarked by Havelock Ellis (Psychology of Sex), there are two phases of current thought anent sexual inversion. One attempts to enlarge the field of the acquired—represented by Binet, who, however, recognizes predisposition; Shrenk, Notzinz and others. The other seeks to enlarge the sphere of the congenital—represented by Krafft-Ebing, Moll and others—and it usually happens that there is truth in both these views, albeit those who represent the acquired frequency deny any congenital element, and ascribe everything to early association or suggestion. The logical way of regarding sexual appetite is as an inborn impulse developing about the time of puberty. At this period suggestion and association, as already stated, may come to play a part in defining the object of the emotion. There is great indefiniteness in the aim of the sexual impulse at this time; frequently signs of sexual emotion directed toward the same sex occur, but the normal passion has usually vague and undifferentiated sexual character at puberty. The channel of sexual emotion is not thereby turned into an utterly abnormal path. The seed of suggestion is sown in various soils. In the many it dies out, in the few it flourishes. The cause can only be a difference in the soil.

Meynert and Nache deny congenital or even sexual instinct at all. They deny instinct for food.

Kiernan suggested, in 1884-88, that sexual inversion was puberty—a variation perhaps due to imperfect sexual differentiation or reversion of type. Masturbation may be a cause of this training, the masturbation resulting from purely physical and often unconscious causes. Stone or uric crystals in the bladder often cause an irritation at the head of the penis; pulling at this to relieve pain leads to the habit. Too tight prepuces with resultant retained secretion have the same effect; so as do ascarides and scybala in the rectum. In dealing with masturbation the physical aspects should be first sought for, the others later. The type of voluptuous tendency is often directed by the circumstances of the first intense voluptuousness. These often cause anomalies in voluptuous imagery, as regards sex. School strain is a factor in this direction, which should receive more attention than it does. As Talbot (Degeneracy: Its Signs, Causes and Effects) remarks, noticeable effects of the nutritive disturbances produced by school strain are local irritations about the sexual organs. Neurotic persons are liable to nerve storms which express themselves in emotional displays or restlessness, or nagging tendencies. These often coincide with the uric acid tendency to express itself in "storms" like other periodic phenomena of the nervous system. In consequence "sexual storms" result in neuropaths, whether the neuropathy be inherited or acquired. Local genital organ irritation leads to scratching. From this are produced "masturbation" storms, which the subject loathes, but can not control. These occur, as already stated, from the direct effects of constipation, and from the worms and other parasites which constipation fosters in the bowel. Teachers, by compelling children to retain urine through fear of masturbation, often lead to what they intend to prevent. At the outset masturbation and sexual explosions are often a mere physical expression of school strain, destitute of moral significance. They are removable by removing the school strain and its consequences. If strengthened by protracted existence they intensify degeneracy due to school strain.

One important element of possible danger is already pointed out—training in the sexual sphere. To avoid and at the same time to enlighten is the problem presented. In dealing with this position, the great requirement—balance, not repression—must be kept in mind. Masturbation is very frequently an expression not of mental or moral deficiency, but, as already stated, of purely local—first in many cases—physical conditions. It can not be too strongly reiterated that irritation—from the presence of worms in the rectum or vagina, an intensely acid urine or constipation—to male foreskin or female clitoris produces local itching, the attempt to relieve which leads to masturbation. Granting all that has been said about the deteriorating effects of masturbation, especially in degenerates, the source should first be sought here. Attention to these physical states will often prevent the development of this practice, and its resultant moral deterioration.

In dealing with the sexual appetite, it should be remembered that encouragement of *healthy* modesty is a duty in both sexes, and pre-eminently so in the male. Much of what is called "sexual purity" is but too often an expression of sexual perversity. While great stress has been laid on the evil effects of association between boys, too little stress has been laid on the danger of training of boys by women. The sexual history of boys demonstrates that their initiation into sexual life was often first at the instance of women older than themselves, frequently servants, but not rarely sexual "purists" or persons whose ostentatious religiosity covered a sexual perversity. In the healthy association of the sexes there is very little danger, but in such morbid association there is much; the more that the morbid generally conceals itself under religiosity and the allied phases of sexual perversion. Great stress has been laid on the dangers of coeducation, but the evidence is growing that education limited to one sex is the source of greater dangers to both boy and girl. It is a matter of common observation among genito-urinary specialists, alien-

ists and gynecologists that much of the alleged "purity" so ostentatiously displayed by female graduates of colleges limited to one sex is the offspring of sexual perversion, which, whether congenital or not, has been fostered by the environment of one sex without the modifying healthy influence of the other.

Chicago Society of Internal Medicine.

Meeting held June 29,1899.

FOREIGN BODY IN A BRONCHUS—OPERATION AND RESULT.

D. JOSEPH M. PATTON—I must beg indulgence for presenting a clinical case which I think is interesting and worthy of study. This young man, in September, 1897, was employed in and about a restaurant in New York city. While engaged there in helping the culinary department, he was one day eating a plate of soup, and on being called suddenly to some duty he took a mouthful of this soup hurriedly and thought he noticed a piece of bone in the soup. He swallowed it hurriedly and was immediately seized with a violent attack of coughing and dyspnea, during which he expectorated a little blood. He soon recovered and went on with his work, continuing his duties about the place for several days, but more or less troubled all the time with coughing. He says that in performing his duties, if he stooped over to pick up anything, he would notice that the position he assumed would "shut off his wind," as he expressed it, and he would have a severe attack of coughing. He denies, however, that at that time or subsequently he was troubled sufficiently with coughing or with dyspnea to incapacitate him from work. He also denies that he had any illness which confined him to bed at any time after the occurrence of the accident. Some time in June, 1898, he appeared at the Chicago Policlinic, and since that time has been under the joint observation of myself and Dr. John Fisher. At the time he appeared there he was troubled with a cough and purulent expectoration, and exhibited a temperature of from 99 to 101.5 degrees. He had no night sweats. Cough was quite troublesome, not particularly paroxysmal, and the expectoration was free, with a decidedly fetid odor. He had lost a good deal of flesh, and was losing steadily at that time. On examination of the chest at that time it was noticed that the air entered the right lung less freely than the left; the right lung would expand almost, if not quite as much as the left lung, but it took a little longer to do it. It was hardly what you would call suppressed respiration. The expiration was prolonged. Just below the right mammary region there was an area of partial dullness with a few rales; in the center of this area there was a distinct stenosis in the bronchial tube. Inspiration was wavy and at times interrupted; expiration was prolonged, but not wavy. Fremitus was slightly increased; the vocal sounds were increased in pitch, but there was no bronchophony. The respiratory murmur was tubular and increased in pitch. There was some very slight inspiratory recession of the intercostal spaces below the point of stenosis. The point of stenosis was at the lower angle of the scar which you see; this is where the inspiratory sound was distinctly interrupted.

He was under observation at the clinic from that time until February of this year. For a time he improved a little in a general way, then seemed to grow worse. Expectoration became more purulent, more fetid; fever became more hectic, and he lost flesh and appetite. An X-ray picture of the chest was taken, which plainly showed the ribs and sternum and a pleuritic effusion in the right pleural cavity, which came almost to the nipple level. We made an exploratory puncture and obtained some serum, so that we know the shadow was from the effusion. The picture did not show this area of partial dullness around the point of stenosis at all. There was nothing about the picture that would indicate any foreign body in the bronchus.

In February, Dr. Van Hook operated on the case before the students of the Northwestern University Medical School, in the mamillary line. The operation was performed in two tempos, the object of the first incision being the formation of adhesions between the pleuræ. An incision in the line of the fibers of the major pectoral muscle was carried down to the fourth rib in the right mamillary line, two inches of rib were resected, and a dressing saturated with 10 per cent. solution of zinc chlorid applied.

One week afterward he opened into the lung with the actual cautery, first exploring the lung with an aspirator-needle in a number of different places without striking any foreign body, or without obtaining any secretion, fluid, or pus. He then went into the lung in three different directions with the actual cautery, to a depth of two or three inches, opening into a large bronchus. There was a little fetid matter discharged through the opening in the bronchial tube. Air passed quite freely in and out of the lung. The wound was drained with a tube, and the next day the patient was out of bed and downstairs, and wanted to go out on the street. He felt very well. The tube was removed in about one week, when discharge had ceased. After that he improved for several weeks; temperature was lower; there was less expectoration. In about ten days the wound was allowed to close. In the early part of April it was noticed that the lower lobe of the lung, posteriorly, was dull, and that there was no air getting into it, it evidently being in a state of collapse. Following this there developed marked tubular breathing of a cavernous type, and well-marked pectoriloquy just below the lower angle of the right scapula. These signs were accompanied by a temperature of hectic type, and by an increase in the amount and fetid character of the sputum. It was thought that these symptoms might be due to the development of an abscess in the posterior portion of the lower lobe of the lung, so an operation in this locality was advised. As no cavity was found, these signs of a cavernous character were probably due to a more free entrance of air into the bronchus supplying this area of lung, due, probably, to some change in the position of the obstructing body. The lower margins of the lower lobe being previously collapsed and the bronchus being patent, the effect would be the same as we frequently observe in marginal collapse of the lung from pleural effusions—i. e., signs simulating a cavity. In view of the outcome of the case we cannot regret the misinterpretation of these signs, as the admittance of air into the lower bronchial tract through the opening made at the second operation was undoubtedly the causative factor in expelling the foreign body. On April 27, the patient being then at the Policlinic Hospital, Dr. Van Hook resected in the region of the eighth rib just below the lower angle of the scapula. There were pleuritic adhesions, so he went directly into the lung with the actual cautery, and opened into a posterior bronchus, making a free opening, so that air entered and came out quite freely. The tube was inserted and the wound packed tightly; the next morning he had quite a severe coughing spell and choked very badly, and during this coughing spell he ejected, through the mouth, this piece of bone. It is a vertebra from the neck of a chicken. It measures two centimeters in its transverse diameter, and one centimeter and eight millimeters in its anteroposterior diameter. It is in a good state of preservation (exhibits specimen). He was up the next day, down in the clinic room, and felt all right. The tube was kept in for about a week, after which the opening was allowed to close. His temperature gradually declined; he improved in strength and flesh; the cough has gradually disappeared. He now has no cough or temperature and has not had any for several weeks. His appetite has improved; he is at work every day and feels practically as well as he ever did.

This case is interesting from two or three standpoints, first as to the clinical history. The clinical history of these cases differs according to the nature of the body which is taken into the bronchial tract. Small bodies like beans and peas, usually create a great deal of disturbance because they may get into the smaller bronchi and induce immediate collapse, and as a rule soon bring on lobar pneumonia, and are very shortly followed by more or less extensive bronchial dilatation. Small pieces of vegetable fiber, like blades of grass or such like, small spiculæ of bone, etc., usually create more disturbance than larger bodies, because they produce more irritation in the bronchial tract. With some of the larger bodies, like this piece of bone, which do not occlude the bronchial tract entirely, it is remarkable how little disturbance we have afterward. This piece of bone was in the bronchus for eighteen months, and beyond the cough, expectoration, fever, and gradual emaciation, there was no disturbance. He might have had just as much disturbance from a localized tuberculosis as he did from this. That is the case with many bodies, although large, if they do not occlude the bronchial tract entirely.

I remember the case of a boy who sucked a woman's ordinary hairpin, five or six inches long, into the trachea, into the left bronchus, head first; the upper end became transfixed through the wall of the bronchial tube. It was in there several days, was taken out by tracheotomy, but while it was in there the boy apparently had no disturbance whatever. He had practically no cough, no dyspnea, and did not seem to suffer at all. The only thing that could be noticed was a slight difference in the amount of air entering the left lung.

On the other hand, the round bodies which occlude the bronchial tract entirely may result in extensive collapse and in pneumonia and create much more disturbance.

The next point is as to the course to be pursued in these cases. In this class of cases it is different from bodies which lodge in the trachea, or which are coughed up into the trachea at every paroxysm of coughing. There tracheotomy will often suffice, and these bodies can be picked out of the trachea, sometimes by forceps, by a string, or by a wire spatula, or something of the kind, and a coughing spell may bring the foreign body up within reach. In this kind of case it is a different matter. Here is a body which gets down into the bronchus and is fixed there. It does not come up, nor does it create much irritation. In this case a great deal of doubt was expressed by a number of physicians as to whether there was anything at all in the bronchus. They were skeptic about it. The danger from the presence of these foreign bodies is from pneumonia and collapse of the lung, secondary pneumonia and bronchiectasis. The latter is sure to develop, and pneumonia most probably will, so that there is no hope through letting the case alone. There is nothing to be gained by waiting. If one is sure that a body of this kind is in the bronchus, it is unnecessary to wait for symptoms, and if it can be localized I should advise going after it. The chances of the foreign body being coughed up, if there is collapse of the lung below, are very slight.

When the first operation was done on this young man we went in too high. This was probably my fault, as I advised operating at that place. We know that in operating for tubercular or abscess cavities in the lung, it is a common thing to find the cavity situated much higher than we are led to believe by the physical signs. That is the rule, and for fear of going too low in this case I think we did just the opposite. There was no collapse in the anterior margin of the lung; there was no retraction; no sclerosis, consequently the lung was not pushed up at all. We got in too high above the bone. The lung was carefully searched with an aspirator-needle, and whether anything could have been gained by needling with a fine needle, I do not know. When the operation was done behind and air allowed to enter the bronchus, the first violent attack of coughing forced the bone up into the trachea and we got it out. You might say that that is perhaps good luck, but I think it is the reason why the foreign body came out.

As to the surgical aspects of the case I have nothing to say except to remark that the surgery was well done and there was absolutely no disturbance in the lung whatever. He seemed just as well the next day as he was the day before. There was no pneumonia; the temperature did not vary; he had no pain or disturbance of any kind.

A question for the future is as to whether the sclerosis developing around this lung will interfere with the caliber of the bronchial tube and result in bronchial dilatations. This is something we do not know, but that is quite possible. As a secondary result of these operations we have saccular dilatation of the bronchial tube. So far we can not see that anything of the kind is taking place. It is known that bronchial dilatation occurs very soon after such an occurrence as this, remarkably so.

DR. INGALS—Was respiration about the same in the upper part as lower down?

DR. PATTON—There was perhaps slight compensatory action of the upper lobe, but the respiration in the middle lobe of the right lung and the posterior part of the lower lobe, when he first came in, before the effusion was noticed, seemed to be a little slower, but quite good.

DR. INGALS—Supposing the foreign body had been lodged in the main bronchus, what would be your opinion of going through the chest for it?

DR. PATTON—On the right side there would practically be no danger in operating in the region of the right main bronchus; on the left it would be more difficult. I should consider the result likely to be doubtful if a tracheotomy were done for the removal of such a body in the main bronchus. In the case I referred to, where a pin was taken out of the left bronchus by a tracheotomy, the pin was grasped nearly in the middle; the upper end was transfixed through the wall of the bronchus, and the pin was grasped about two inches from the point, and in twisting it it was broken, although the head of the pin was at least three inches farther in the bronchus. Very many expedients have been devised for getting foreign bodies out of a bronchus. Someone, for instance, has advised pouring into the trachea an ounce or two of liquid and inverting the patient immediately, being prepared to do a tracheotomy at once in case any difficulty was encountered. That is taking a good many chances. I would not care to search for a foreign body in that way. But this case illustrates the extreme difficulty of exactly localizing the point of obstruction for the purpose of operating.

DR. EDWARD F. WELLS—I would like to ask Dr. Patton whether in his experience or reading he has noted that perhaps frequently a foreign body has been expelled by coughing during the operation or shortly after, when it has not been found during the operation, or has not been found at all.

DR. PATTON—In the majority of cases the foreign body has been expelled by way of the mouth subsequent to the operation.

DR. WELLS—The reason I asked that question is because many years ago a child inhaled a piece of peanut. Pneumonia followed shortly afterward and an abscess developed. An operation was undertaken, and after an incision had been made down to the pleura, an aspirator-needle was introduced three times in different directions, and nothing whatever was found. But after the third introduction of the needle the child suddenly became choked, coughed spasmodically, and, to my recollection, expelled three-quarters or an ounce of pus with the piece of the peanut. My attention since then has been called to quite a number of cases in which the foreign body has been expelled during the operation or very shortly afterward, when efforts to find it during the operation were utterly futile, and it has afterward been expelled by coughing.

DR. PATTON—Godlee cautions us against removing the tube and allowing the opening to close too early. These foreign bodies may be expelled through the opening some little time after the operation, and he cites a case of that nature in a boy. The boy had inhaled the point of a top into the bronchus, he operated, and some time subsequent to the operation the boy expelled the foreign body through the opening that he had made. I think that is a good point because there is no objection, particularly, to keeping these openings patent for some little time after the operation, if they are dressed properly, and a small foreign body may readily make its exit in that way.

DR. WELLS—Did I understand you to say, Dr. Patton, that there is usually a good deal of difficulty in locating the foreign body?

DR. PATTON—There is a good deal of difficulty in localizing the foreign body after you get into the lung.

DR. WELLS—I hardly agree with that, from the fact that some inpediment exists to breathing which can be usually definitely located. It is rather easily done. Is not that your experience?

DR. PATTON—Oh, yes. But I have reference to localizing the foreign body after you get into the lung.

DR. WELLS—How frequently an operation is undertaken for the removal of a foreign body apparently located by the physical signs, and yet nothing is found at that point, but the foreign body is afterward expelled.

DR. PATTON—That is true. Difficulty arises from localizing the foreign body after you have gotten through the pleura.

DR. INGALS—What was the objective point in the second operation?

DR. PATTON—It was a question at that time whether it was merely collapse, or whether he had aspirated some purulent material in there and had developed a cavity. The signs at the time of the operation were almost identical with those of a cavity. I refer to those peculiar physical signs we get where there is collapse of the margin or lower portion of the lung, retracting it and giving the signs which simulate those of a cavity. As there was no air going into the lung, and it was doubtful whether it was merely collapse or a cavity, I advised a second-

ary operation in this region, to see whether there was a cavity there or not and to open into the bronchial tract and let the air in. There was no cavity, but simply collapse.

DR. E. FLETCHER INGALS—I have had no experience in bronchotomy. I have had, however, considerable experience with foreign bodies in the bronchial tubes and trachea, but I have never opened the chest for the extraction of the body. I am greatly pleased that such cases may have so good an outcome. I have not hitherto thought that the position taken by Dr. Patton, viz., that it is better to operate as soon as we can localize the foreign body, is the best for the patient. I have thought that because many of these bodies are spontaneously expelled sooner or later, and from the fact that there is considerable danger attending bronchotomy, it is better to wait for a time, unless there are urgent symptoms, before doing a more radical operation than tracheotomy. In this case the operation was certainly the only thing to advise, and it would have been negligent to wait. I wish to ask the author of the paper whether in acute cases he believes it better to operate as soon as the foreign body is localized. The development of bronchitis, with a little dilatation of the tube, or irritation of the lung and possibly formation of a cavity in the lung itself, may eventually be the cause of secretions and expectoration which will enable the patient to get rid of the foreign body without any operation.

I remember reading of a case in which a bit of hickory-nutshell, which was retained in the lung for many years, was finally coughed up, and the patient made a good recovery. In that case it would undoubtedly have been much better could the foreign body have been found and removed earlier, but at that time operations could not be performed as safely as they are now.

I have on two or three occasions removed foreign bodies from a bronchus. On one occasion I removed a large kernel of corn from the very farthest end of the right bronchus. Again, in another case, I removed a sharp spicula of bone from the farthest end of the left bronchus. In still another case I removed a bit of wheat from a bronchus.

I was surprised not long since at hearing a gentleman of high standing recommend leaving such a foreign body entirely alone, hoping that the patient would have an attack of cough that would expel it. His view was that there was no very great danger from the operation, but little from delay. In the case of a foreign body of any considerable size in the trachea, operation should be advised at once, after other procedures have been tried, such as inverting the patient. There is always danger while the foreign body remains, but in a large percentage of cases they will be spontaneously expelled. Even small bodies are often difficult to remove.

I operated, two or three years ago, on a woman who had inhaled about five-eighths of an inch of a match. I thought I could localize the foreign body at a point about an inch and a half below the main right bronchus, by the pain of which she complained, but I could not tell from the respiratory murmur; yet I was satisfied there was something in the air-passages; I did a tracheotomy, but did not get the foreign body. I kept a tracheotomy-tube in the trachea for a few days, as I believe it is best to do in cases where we do not find the body we are after, and finally told the interne that he might take the tube out; the same day he removed the tube she coughed up the match.

I once operated on a child for a button in a branch of the bronchus, that had gone so far in that it could not be reached. In that case I felt confident the body was present, from the localized rales, but there was no distinct obstruction. The tube was worn for four or five weeks, but the button was not secured until about five weeks afterward, when it was coughed out. The usual recommendation is that we stitch the edges of the trachea to the integument, if the foreign body is not obtained at the time of the operation. This does not seem to me a good procedure. A better plan is to have in a large tube for a few weeks, and make repeated efforts to get rid of the foreign body.

I should think that the danger would be very considerable in a bronchotomy when operating near the root of the lung, much more so than at a distance like the operation in this case; but I have no doubt a modern surgeon would get in there.

DR. PATTON (closing the discussion)—I agree with Dr. Ingals in regard to the class of cases he has cited and outlined. As to the advisability of operating early in these cases, we must draw a distinct line between the class of cases he has cited and the class to which this case belongs. The point is simply this: In small bodies which get into the trachea, and where we are in doubt as to how far in they may be, which are not localized by any distinct physical signs, it would be very doubtful surgery to go after them any further than do tracheotomy and adopt the course advised by Dr. Ingals. In this class of cases we have a different condition. Here we have a distinct stenosis to deal with. The fact that the stenosis is not complete and does not result in collapse of the lung supplied by the tube occluded is only more positive evidence that it is a local affair and can be reached and should be sought for. If we had a smaller body, it would probably go in a little farther and possibly result in immediate collapse and pneumonia. It would be a much more difficult thing to get at. But the fact that the collapse came on after the stenosis occurred, coupled with the fact that there was diminished respiratory capacity of that lung for a long time after the occurrence of the stenosis, and not complete obstruction, and the additional fact that there were local signs of stenosis of the tube, show conclusively that there is a localized condition that you can reach, or stand a good chance of reaching, and that the patient's prospects for complete recovery are much better by operating early and not waiting until we get a cavity or bronchial dilatation, which is sure to come, and which, when filled with secretions, will be likely to result in lobular pneumonia, probably septic, at a more or less early date, and which will result in further collapse of the lung and possibly in gangrene. And so it does not appear to me wise to wait for these conditions to develop before searching for the foreign body. That, I think, is the position assumed by Godlee, who has done much lung surgery. In the class described by Dr. Ingals, I agree with him as to the course to be pursued, and success is most often obtained by adopting the course he advises.

DR. INGALS—Supposing you saw a case in which there was obstruction by a foreign body similar to this, would it be your idea to operate within the first week, or to wait a month or two to see whether the body would be coughed out?

DR. PATTON—It is difficult to make a direct statement in reply to Dr. Ingals, for the reason that we are not usually present when these accidents occur. We have to take the statement of the patient to a great extent, and some physicians are rather backward in accepting the statements made by patients in this regard. I believe that we should take the statement with a good deal of credence, because he or she, as the case may be, is not likely to misinterpret the symptoms at the time, and he is not likely to greatly exaggerate because he is conscious of the fact that a body has gotten into his trachea. If we do accept the statements of patients and feel sure that there is a foreign body in a bronchus, and we believe it to be large enough so that it will probably not come out through the larynx, I do not see any use in waiting if we can localize it at all. On the other hand, this case came to us with the statement that the foreign body was inhaled months before. We did not at the time feel that we were warranted in operating until we saw what course the case was going to take. But as the bronchial dilatation grew worse, as the fetid expectoration became more abundant and the fever ranged higher and loss of flesh continued, we felt there was no use in waiting longer until he actually developed some serious condition. I think it all depends on how certain one may feel as to whether a foreign body is in there or not, and how much chance he can take.

DR. INGALS—If a patient were getting on comfortably you would feel more like waiting than if fever were developing?

DR. PATTON—I should; yes.

Chicago Neurological Society.

Regular Meeting, April 25, 1899.

(Continued from Page 284.)

DR. ARCHIBALD CHURCH—I would like to ask attention to a form of brain disease which is comparatively rare, and of which I have seen two cases and suspected the same condition in a third instance. The first case was a man, 50 years of age, who, at the age of 23, was digging a well, and some boys, in trying to annoy him, tossed a pebble into the well, which had reached a depth of about twenty feet, striking him in the parietal region. It simply angered him at the time, made a trivial

scalp cut, and very little was thought of it. Afterward he acted as a conductor in the railway service for many years, gradually developing more or less disturbance of sensation on the right side, and finally became hemiplegic. He would have convulsions affecting the right side at times. Frequently these convulsions commenced in the right hand, becoming generalized, in other instances only the right upper extremity was involved. At one time he was actually incapacitated by right hemiplegia, which partially subsided for a time and subsequently became complete. I saw the man some twenty years after the original injury; he was hemiparetic, and had occasional convulsions on that side. I advised an exploratory operation, and when the trephine had been used for a few moments suddenly there was a gush of hemorrhage of the most startling character I have ever witnessed. It was with the greatest difficulty that it could be checked by plugging with iodoform gauze, some of which was pressed within the skull, and not until the carotid was ligated on the same side was the hemorrhage controlled. Dr. McArthur did the operation, and it was our belief that we had opened an aneurysm within the skull. The man improved temporarily and went to Southern Ohio. Three years later he died and an examination was made by a physician, who stated that the left side of the head was empty except for the rags the doctors in Chicago had tucked into it.

Another case I saw at about the same time was a young boy who had fits which commenced in the left hand. There was a history of cephalic traumatism, the exact nature of which I can not now recall. Finally, being very urgent for an operation, it was done at the County Hospital, by Dr. T. A. Davis. He cut down through the dura, explored the brain and suddenly got a terrific hemorrhage, and yet was able, by plugging the cavity with gauze, to check the bleeding. I saw the boy two days after, when the dressing was removed, and in withdrawing the gauze there was a cavity large enough to accommodate a hen's egg, lined with dense, fibrous, glistening membrane, reminding one of a large arterial pouch. The boy recovered from the operation but I have failed in all attempts to trace the case.

A young woman, 21 years of age, came from Quincy. She gave a history pointing to brain disease. There was a hemiplegic condition, spasticity and tetanoid spasms. She gave a history of having had a decided subjective bruit synchronous with the pulse. Upon auscultation I could objectively make out a bruit corresponding to the indicated location of the disease. I suspected that there might be an aneurysm. She is still alive; I heard from her last week, and her condition remains about stationary.

Aneurysmal tumors should be detectable by the X-ray. If we can make out the arch of the aorta, the heart and other blood-channels by this means, these growths should also give a shadow.

DR. DANIEL R. BROWER—Seeing these interesting cases of Dr. Patrick recalls an experience I had about a year ago. A man, 55 years of age, was brought to my office by a physician, as a well-marked case of Jacksonian epilepsy, and with the classical symptoms of intracranial tumor. The case was operated on by Dr. Senn. He remained here for a short time under treatment by potassium iodid, with very great amelioration of all his symptoms. The paroxysms, which were several a day, had ceased, and his mental condition improved. He went home, continued the treatment for a time, stopped it, and very soon his symptoms returned with great exaggeration, and he was again brought back to the city. Dr. Senn then operated upon him. The paroxysms began in the hand; the tumor was supposed to be located in the hand center. No tumor was found by the operation. He gave a history of having some years before had considerable trouble with a suppurating ear, which had existed for a long time. Dr. Senn thought it might possibly be a mastoid abscess, but he found none at the operation. A few days afterward the man died. A post-mortem examination was made, and revealed a subcortical tumor, the size of a walnut, and an abscess in the mastoid cells. I have never seen any but temporary benefit from surgical interference in tumors of the brain.

During the past winter I have seen remarkable effects from lumbar puncture in relieving pressure symptoms in cases of cerebro-spinal meningitis, and, inasmuch as the most distressing symptoms of these tumors are due to pressure. I shall advise its use in the next case showing these symptoms.

DR. PATRICK—I have not recently followed the literature closely in regard to lumbar puncture in cases of tumor, but a couple of years ago I did keep track of it pretty thoroughly for a time, and the results from this measure, even for amelioration of the symptoms, were not particularly good. A number of cases died suddenly when puncture was made; in others the headache was enormously increased, so that patients complained bitterly of headache as soon as the fluid began to flow from the spinal canal.

DR. JAMES B. HERRICK—What Dr. Patrick has said regarding the mental condition of patients with cerebral tumors in the frontal region recalls to mind a patient whom I saw two or three years ago in whom there was a history of change in the mental condition, and later symptoms of severe headache, Jacksonian epilepsy, etc., so that there was little question about the case being one of tumor of the brain. The mental condition was, however, that of melancholia and despondency. While the patient was in the hospital he cut his throat with a razor. At autopsy the tumor was found in the frontal lobe, and by its pressure it had involved some of the motor centers, and induced Jacksonian epilepsy.

There is one form of tumor which, strictly speaking, might not be called tumor of the brain, that presents a great deal of difficulty in diagnosis, and that is the multiple tumor as it involves the meninges. A close resemblance to tuberculous meningitis may exist in these cases. One case of unusual interest I recall, seen about a year ago in the Presbyterian Hospital. Dr. Lyman asked me to give his clinic, and the interne in going through the hospital with me to look for material, said to me, "there is a good case of tuberculous meningitis in the children's ward." I looked the patient over, and thought it would be a beautiful case for clinical demonstration. I showed the case to the class as one of tuberculous meningitis. It was a child with a somewhat vague and indefinite history. There had been complaint of considerable headache and of irritability for several days, then two or three convulsions. The history was very indefinite as regards temperature. The child had gradually become comatose, and at the time I examined the patient there was complete coma. This was interrupted occasionally by the typical cephalic cry; the neck was rigid; the head drawn back; there was some paralysis of the ocular muscles; there was distinct optic neuritis, and most pronounced emaciation. The patient died a little later. An autopsy showed a walnut-sized sarcoma of the frontal lobe, with diffuse sarcomatosis of the pia mater of the brain and cord, the nodules varying from those of minute size up to those the size of a hazelnut. This rather rare case has been reported by Dr. Weaver in the *Journal of Experimental Medicine*.

In looking over the history again in the light of the post-mortem, I think there are two facts which should have drawn at least suspicion toward the existence of such a condition rather than that of tuberculous meningitis, namely, the long continuance of the disease, which extended over fully ten or twelve weeks, and the fact that there was but slight elevation of temperature.

DR. KUH—Was the fever intermittent?

DR. HERRICK—Yes, but the elevation of temperature was very slight, seldom up to 100.

DR. SANGER BROWN—I think we often lose sight of the fact that in cases of brain tumor many of the severest symptoms are actually neurasthenic, and not, as is too frequently believed, focal. I refer particularly to the headaches. These are generally, in my opinion, practically identical with those found in many cases of severe neurasthenia; that is, the patient will wake up from 3 to 5 a.m., after having gone to bed feeling fairly comfortable, with a most insufferable and profound headache, so prostrating that he often has to sit down and rest several times while getting dressed. He is often able, notwithstanding this, to take a fair breakfast, and after this gradually he is relieved, so that often not later than 10 a.m. he is fairly comfortable again, and this may not be repeated, with anything like the same severity at least, more than several times in a week. It may be accompanied with nausea and vomiting in both cases, and I favor the hypothesis that this is caused by the depressing effect of the growth upon the vital portions,

rather than by irritation of the meninges, or indeed by the irritation of any of the cerebral tissues.

I wish to draw attention also, by way of criticism, to the doctrine that pressure or irritation of a growth in the brain is the cause of optic neuritis, by stating that it quite frequently, or perhaps more properly, quite occasionally, happens that in cases of severe anemia, optic neuritis is found associated with the headache and symptoms of nervous prostration, which I have already referred to. I make these statements simply as suggestive criticisms upon the theories rather currently held.

DR. RICHARD DEWEY—I wish to speak briefly of the symptoms in cases of brain tumor. It would seem that it is very rare to find any typical form of mental disturbance in these cases, most of them presenting symptoms the result of pressure or irritation of the locality that is affected, with a great deal of dullness, semi-stupor, apathy, and at times a good deal of emotional disturbance as the result of the irritation and pain. But in rare cases, something almost corresponding to maniacial attacks seems to make its appearance. The mental symptoms of cerebral tumors have received comparatively little systematic attention. These are certainly worthy of more attention than they generally receive. The surgeon or family practitioner scarcely ever gives desirable attention to these matters, and the family themselves are not likely to notice them. It is surprising how very great degrees of mental aberration may exist, both in cases of tumor and in other brain diseases, without intimate friends and acquaintances realizing them. There are certain forms of mental disease that may appear in almost typical form in cases of brain tumor. Two of them have been mentioned here this evening—neurasthenia and hysteria. Sometimes neurasthenia and hysteria are considered to be the sole causes of the disturbance. Another form of brain trouble which may be confounded with tumor, and is accompanied by symptoms of a more or less typical character, is paresis. Many, very many, of these cases have been reported as cases of paresis where subsequently brain tumor has been found to exist.

MULTIPLE SCLEROSIS.

DR. M. L. GOODING—Our patient is a young man 23 years of age, of Russian parentage, the eldest of five children. He was born at term and was perfectly well up to the age of 6 years, at which time he had scarlet fever, but as far as we can ascertain this was followed by no renal, glandular, anginous, articular or aural sequelæ. His parents, as well as three brothers and one sister, are living and well and free from any nervous or mental disease. No history or evidence of syphilis or alcoholism can be elicited.

When 7 years of age, he was lost during a blizzard and almost succumbed to the exposure to which he was subjected. Shortly afterward he began to exhibit the first symptoms of his present malady. He began to have some difficulty in walking, and seemed to become easily fatigued on exertion. He also began to fall behind in his school work, although previously maintaining a good standing. He further began to have occasional spells of headache and dizziness. At the age of 13 he had an apoplectic onset involving the entire right side. When 15 years of age he had ptosis of the right lid, lasting six months.

The unsteadiness in gait now became more marked, the limbs, as well as the trunk and head, being thrown into violent oscillations on the slightest voluntary effort. His speech also became defective. He has had no bladder, sensory or visceral disturbances. The lad appears well nourished and of fair size for his age. The skull, scalp, ears, teeth, gums and tongue present no abnormality.

As we observe him closely, we note the expressionless face, and as we engage him in conversation the incapacity for continuous mental effort is strikingly shown. There is slight obliteration of the nasolabial fold and drooping of the angle of the mouth on the right side.

Several years ago, while being shown before the class at the College of Physicians and Surgeons, peculiar grimaces, involuntary and uncontrollable, were remarked, but the condition seems now to be absent. As we listen to his speech we notice that the words are uttered slowly and in a monotone. This bradylalia is associated with tremorlessness of the lips. As he attempts to walk, the stiffness and inco-ordination of his legs prevent the performance of this act without the assistance of a cane. A pronounced swaying is present when standing with closed eyes.

Inco-ordination and a rough jerky tremor of the upper extremities are apparent, as we ask him to bring the tips of his fingers together, button his coat or carry a glass of water to his lips. This is more marked on the left side. The knee-jerks are excessively exaggerated and ankle-clonus is present.

We can find no sensory disturbance. As we examine his eyes we detect a nystagmus—lateral, vertical and rotary. The right eye deviates somewhat from its proper axis, and is slightly turned inward. The pupils are normal. The fundus shows a secondary atrophy, with a peculiar discoloration of the disc.

From this array of symptoms we are enabled to make a very positive diagnosis of multiple sclerosis. On account of the gait, ataxia, tremor, nystagmus and speech defect, this disease may be confounded with the several hereditary ataxias. Friederich's ataxia can be excluded by the presence of knee-jerk with clonus and optic atrophy, and the absence of sclerosis and club-feet. The Romberg phenomenon, transitory oculomotor palsy, absence of family history, and early onset differentiate the picture from a hereditary cerebellar ataxia.

Syphilis of the brain and cord can be ruled out by the absence of history and signs of the disease, and the therapeutic test.

Brain tumor of the posterior fossa is sometimes accompanied by this form of gait, ataxia and nystagmus, but the more rapid progress of this condition, the greater degree of headache and vertigo and the positive symptoms of multiple sclerosis present no difficulty in eliminating tumor. As already indicated, the treatment by potassium iodid and mercury were futile. His nutrition has been maintained through appropriate regulation of diet, exercise and hygiene. For the relief of his tremor and agitation he has received the static breeze, together with a combination of

R.	Sodii brom	gr. x	65
	Ext. hyoscyami fl	gtt. viii	40
	Liq. kali ars	gtt. ii	10
	Syr, hypophos. comp. q. s. ad	3i	3 90
M.	Sig. 3i t. i. d.		

Topeka Academy of Medicine and Surgery.

Meeting Held in Topeka, Kan., July 10, 1899.

INFANT FEEDING.

DR. J. M. PEERS presented a paper on "Feeding of Infants in Relation to Diarrhea." He spoke especially of the proper perforation and use of milk, showing the difference between cow's and human milk, and how to make the former suitable for infants' use.

DR. H. B. HOGEBOOM emphasized the importance of artificial feeding.

DR. I. BARNES recommended artificial food prepared with cream 2 parts, milk 3, lime-water 1 and water 10 parts.

DR. R. MCVEY spoke of food, heat and bacteria in causing infantile troubles, and the relation they sustain to each other. If indigestion is the result of bacteria, food and heat aid the development. He pointed out the dependence of the food and bacteria. It is a question whether the food or bacteria causes the indigestion, or whether the indigestion causes the bacteria.

DR. O. DAVIS spoke of preparing the food by leaving the milk in a cool place until the cream rises, then drawing off two-thirds of the bottom with a siphon, and adding water and sugar.

DR. S. G. STEWART—The mother complains as soon as the child begins to eructate; then try artificial foods. Cow's milk comes first. Sterilize it, then neutralize it with lime-water. We need to teach the laity that artificial foods are a poor substitute for milk, and should never be used when milk can be obtained.

It is generally a year after the introduction of a sick animal that the disease breaks out in a stable. Nothing is more common than, in an infected stable, to see a healthy cow become tubercular, some time after having occupied the place left vacant by the death of a tubercular cow. (Strauss: Tuberculose et son bacille.)

Sketch of Century's Progress in Medicine and Surgery.*

DR. J. WARD COUSINS, M.D., F.R.C.S., opened his address with a general review of the conditions of medical science at the beginning of the century, the birth of the modern school of medicine, the discovery of vaccination and its results, the progress in sanitary science and preventive medicine, the lessons of the cholera epidemic of 1848 and the Crimean War, and paid a tribute to the labors of Florence Nightingale in hospital reform, and to

ERNEST HART,

who was a devoted pioneer in preventive medicine, and labored with enthusiasm in the great questions of epidemic cholera, water-borne disease, vaccination, and many other topics. He rendered invaluable help to the children of the land, and made plain the necessity for reform in the Poor-law infirmaries of the United Kingdom. He threw all his energy into his editorial labors, and speedily raised the *British Medical Journal* into the commanding position it now occupies. His name and work will forever be intimately associated with the history and growth of our great and world-wide organization.

PATHOLOGY.

The early part of the century will ever be recognized as the birthtime of modern pathology—the period when the huge chasm between dead morbid anatomy and living pathology began to be bridged over. The teachings of John Hunter had long exploded the old humoral theories of disease. The leading minds in those days no longer considered that disease depended on an excess of bile, or blood, or phlegm, and the other fluids of the body, and that it could be cured by getting rid of these faulty elements. The principles formulated by Hunter were maintained by succeeding writers in the same field for many years. His pathology was a long way in advance of his predecessors, and he was the first to recognize that all the processes of the organism belonged to biologic science. He saw that disease was only a deviation from health, and that both conditions were regulated by the same vital laws. He regarded the blood as possessed of life, like the solid parts of the body, and its plastic materials as the elements of all growth and structural repair, and taught that exudations composed of homogeneous and transparent fluids containing within them no visible form sweated through the walls of the blood-vessels, and then became changed into living tissue by a process of vital crystallization.

About the year 1830 great improvement took place in the manufacture of the achromatic compound microscope, and this gave a great impetus both to physiology and pathology, and the value of microscopic examination began to be generally appreciated. Moreover, the Council of the Royal College of Surgeons of that day was so impressed with the utility and importance of the facts revealed by the minute dissection and examination of elementary structures that in 1841 they determined to establish a professorship of histology, and to form a collection of preparations both of the healthy and morbid tissues of plants and animals which should elucidate the value of microscopic investigation.

We can now look back on the time when the progress of physiology was everywhere recognized as the true basis of all pathologic science. In 1838 Schleiden made his brilliant discoveries in vegetable tissues, and soon after Schwann investigated the cellular structure of animal bodies. He followed Hunter in believing that vital centers of new growth were spontaneously developed in semi-solid exudations, and that constructive elements could actually be formed within amorphous substances. But, although the progress of the century has been the outcome of the labors of many able workers, still I venture to think we can justly give the first place to Rudolph Virchow. We are indebted to him for exhibiting histology as the real instrument for unfolding the deep mysteries of disease. He practically gave the medical world a new pathology founded on laborious observation and experiment. Every kind of organic structure and every new formation, he announced, could be traced to a vital source. There never has been and there never will be such an erratic phenomenon as spontaneous generation in either physiology or pathology. He recognized that every plastic exudation, which had been called amorphous material, had wrapped up within it living cells, and that these had come from living structures, and thus every new formation must be the offspring of some living tissue in which its living germs arose.

To-day we are able to appreciate the fact that the evolution of our new pathology has progressed side by side with the evolution of biology, and that, in its broadest sense, pathology is an outgrowth of biology. The work of the last fifty years may be rightly defined as the great unraveling of the deep relations between the healthy phenomena of life and the variations which are outside the normal cycle of these vital phenomena. Through many years biology and pathology have been mutual helps in their onward and remarkable evolution, and we may rest assured that in the coming century their healthy reaction on each other will still go on. Pathology will still advance, and the new discoveries of biology will serve as starting points of new pathologic truths; at the same time, the ordeal of biologic criticism will be accepted as the test of every new pathologic development.

BACTERIOLOGY.

Recent investigations in bacteriology have proved a great stimulus to the study of the relations between the diseases of mankind and those of the lower animals, and this relationship will form an important part of future researches. It is only a few years ago that the real nature of that dreadful scourge of the human race, tuberculosis, was discovered, and its intimate association with the same disorder in domestic animals clearly brought to light. Laennec was the first observer who described tuberculous nodules, and traced their development from miliary tubercles. In 1865 the inoculation of animals with caseous material was found to produce tiny masses in their bodies which were in all respects similar to the disease in man. Some physicians were bold enough to assert that the phenomena suggested the probability of contagion, but the notion only excited the ridicule of the profession at that period. Tuberculous disease was generally regarded as a hereditary disorder transmissible in various degrees of intensity. At the same time external influences were looked on as powerful factors which could kindle the smoldering flame into activity. From the very dawn of modern pathology tuberculous disease received profound investigation, and the researches only corroborated the time-honored theory. The microscope failed to detect in the diseased parts any specific elements, and in vain cells and granules, and cells of giant form were searched for some characteristic quality. Tubercle was examined by the best observers in the civilized world; thousands of clever eyes had gazed at it with intense devotion, and with a remarkable unanimity they pronounced the opinion that it was so indefinite in structure it could be recognized as much by negative as positive qualities.

In 1882 the whole pathology underwent a great revolution by the demonstration of the life history of the tubercle bacillus. The disease, occurring in any tissue or organ, is now universally regarded as a specific disorder, the bacillus the absolute proof of its invasion, and the cause of the morbid changes. The long-accepted causes are now dislodged from their position, and are now rightly grouped as morbid tendencies. The inheritance of constitutional peculiarities, the liability to chronic inflammations, and the susceptibility to external influences, are now regarded as conditions which help the microbe to establish itself within the body. Still, these factors are not less potent because the specific characters of tuberculosis have been revealed.

* Abstract of President's address at the Sixty-seventh Annual Meeting of the British Medical Association, from advance sheets of the British Medical Journal.

This pathologic transformation still has around it many unsettled problems. It is, however, a fact of history that Koch, by his own researches, brought to light from the microscopic elements of tubercle a living atom which no human eye had before seen. I believe that one may anticipate that this great discovery will be of priceless benefit to mankind.

Bacteriologic investigation has already unfolded many of the problems connected with diphtheria. The researches began in Germany in 1882, the chief experiments were by Drs. Behring and Kitasato, and they were soon followed by Dr. Roux, of the Pasteur Institute in Paris. We now know that many animals are liable to its attacks. It is communicable to the horse, rabbit, guinea-pig, and fowl, and some species seem to suffer from a chronic form of the disease. Horses when attacked develop similar symptoms to those which follow inoculation of diphtherial toxin.

The deadly bubonic plague which was epidemic throughout Europe during the Middle Ages, has unfortunately proved a dreadful scourge in India and the East during the last three years. Many earnest workers have made the disease the subject of an elaborate inquiry. In 1894 a specific bacillus was discovered in the blood of a patient suffering from epidemic plague. There is much reason to believe that domestic animals and rats are responsible for spreading the infection, and squirrels and cats have been known to die of the disease. It has recently been stated by a French observer that fleas are dangerous disseminators of the disease. As the result of a series of experiments, he affirms that fleas taken from rats suffering from plague can communicate the disease to healthy rats, which in their turn become centers of infection.

Professor Ogsten in 1881 detected micro-organisms in acute abscesses, and this important discovery has been followed by many elaborate inquiries which have proved the direct connection between suppuration and pathogenic organisms. It is certain that the staphylococcus, the streptococcus, and the bacillus coli communis, and other species also, may be the exciting cause of septic conditions in man and the lower animals. Around septicemia to-day there are many unsolved problems. Are the micro-organisms the direct cause of the disease, or is it produced by the chemical substances which they elaborate? All animals appear to be liable to blood poisoning. Dr. Hewlett says that poultry, pigeons, pheasants, and sparrows are susceptible to a disease, which Pasteur proved to be excited by a bacillus identical with the bacillus of rabbit septicemia. Even the mouse has its specific septic disturbance, and the organisms which are present in its blood appear to be identical with those discovered in the septic disorders of swine.

MALARIA.

Investigators have recently been endeavoring to unravel the secrets of malaria poisoning. The disease has been traced by Surgeon-Major Ross and Dr. Manson to a parasite which has the power of assuming a latent condition within the human body. It actually lives in the interior of the red corpuscles of the blood. Dr. Manson thinks that it is removed from the blood by some suctorial insect, and that this insect is a species of mosquito. The parasite is propagated outside the human body. The insects are capable of infecting their larvæ, and man is in turn infected by drinking the water contaminated by the mosquito, or by inhaling the dust of the dry mud of the pools in which mosquitoes have perished.

I refer to these facts only to show the great impulse bacteriology has given to the study of the intimate connection between the diseases of mankind and the diseases of animals. It is certain that the latter are far more often the agents by which diseases are distributed than we are at present able to detect. The same disorder in different animals produces very different manifestations, and the symptoms may be so variable that the recognition of a common specific cause is almost impossible.

What may we expect from this young science in the future? We are only touching the fringe of its possible revelations. Much that has been done will have to be done over again, and much that has been written will have to be rewritten. How many questions have yet to be solved? Will the further evolution of bacteriology solve the great problem concerning immunity? The striking differences in the susceptibility to disease in individuals are still unfathomed. Some seem to possess a natural insusceptibility to infectious disorders while others are susceptible on the smallest exposure. I do not believe that any individual can inherit or acquire a resisting power for all forms of disease; some races appear to acquire immunity, and native populations in some parts of the world exhibit very little susceptibility to yellow fever and malaria. Race immunity is generally explained by natural selection and protection by inheritance. During the long periods susceptible persons were weeded out, and those that remain are capable of transmitting their insusceptibility. But we learn from experience the resisting power to infectious diseases is very variable, and that there is no such thing in the world as absolute immunity. On the other hand, bacteriology offers us the comforting doctrine of phagocytosis. The cells of the blood are ever ready to engulf and destroy living bacteria, and to cast them out as unwelcome guests. The leucocytes may be compared to a great army of invisible warriors. They send out their scouts, and as soon as an enemy is in sight myriads appear at the very seat of infection and are drawn up to open the attack on the intruding bacterial forces; all ends well when the battle of the cells terminates in the destruction of the enemy, but unfortunately sometimes the leucocytes are beaten back and the bacteria are victorious; then they can multiply without hindrance, and general infection is the result of the defeat.

SURGICAL ANESTHESIA.

Of the history of the discovery of surgical anesthesia he spoke at length:

In the noontime of this Victorian era surgical anesthesia was the brilliant gift to the civilized world by our brethren and kinsmen across the great Atlantic, and at the last annual meeting but one of this, the greatest of the centuries, we desire to record our admiration of the courage and genius of William Morton and the wisdom and surgical skill of Charles Collins Warren, and again to crown their memories with enduring fame as great benefactors of the human race.

It is an interesting fact that the original anesthetic agents still hold the confidence of the medical world. There are many differences of opinion on their essential virtues and a wide-spread hope that soon safer remedies may be discovered. Sir James Simpson entertained this hope until the end of his career, and Dr. Snow, who did so much during his life to perfect anesthesia administration, believed that better agents would be found. It is my opinion that surgical anesthesia can never be wholly stripped of risk, and that to-day the risk is greatly reduced by our modern safeguards and improved methods of administration. It is certain that we have not reached finality in the matter of surgical anesthesia, but that by experience and the skilful adjustment of the dose we are entitled to regard the inhalation of our present agents as practically safe.

During the preanesthetic age, operations were confined to cases in which surgical interference was absolutely necessary, and both patient and surgeon had to be brave and determined —one to suffer pain, and the other to perform delicate manipulations with rapidity and dexterity. The introduction of surgical anesthesia exercised at once a great influence on the practice of surgery, and the number of operations increased in all directions. Within six months the surgical work of the London hospitals was actually doubled, and in every department the domain of surgery rapidly extended.

Unfortunately, the surgical world was quite unprepared for

the sudden outburst of enthusiasm which followed the great discovery. At this period surgical instruments were few in number, and very different from what they are to-day. The microscope was only just adopted as an instrument of pathologic research, and many ingenious aids to diagnosis now universal were not then in existence. The hospitals were for the most part wretched receptacles for the sick. They were constructed regardless of all sanitary precautions, and without any means for securing adequate light and fresh air for the safe treatment of urgent surgical cases and acute diseases. The nursing system, too, was rotten to the core. Nursing then meant nothing more than the attendance of a parcel of ignorant women who possessed no qualification for their high and self-sacrificing duties, and who had never received a moment's training. It is a fact that in those days thousands of lives were extinguished at the shrine of ignorance and superstition, and thousands more for the want of sobriety and cleanliness. Under such conditions is it not surprising that suppuration followed almost every wound, and that septic processes were started by every operation.

The high mortality which occurred both in the institutions of this country and the Continent excited great anxiety, and roused the profession to earnest investigation. The great increase in the work of the hospitals soon revealed their insanitary condition, and many structural defects. Again and again gangrene, pyemia, and erysipelas ran through the wards of these old buildings, and the medical officers saw clearly that these outbreaks were infective disorders, and were carried from one patient to another.

We have now reached the dawn of another important epoch in the medical history of the century. The terrible ravages of sepsis, which appeared to have gone almost beyond control, helped to bring about better ward ventilation, and improved sanitary arrangements in many of the old buildings. The evil of overcrowding was checked, and increased cubic space provided for patients. Many reforms soon followed in the administrative and nursing departments, as well as an improved technic in operative surgery. Some treated their cases with water dressing or irrigation; some, having discarded greasy compounds, closed all their wounds with friar's balsam; and others, after bringing together the cut integuments with strapping, used dry wool and pressure. There can be no doubt that greater cleanliness and new methods of treatment were introduced at this period with success, and these advances helped to prepare the surgical world for the coming of the great crisis when the doctrines of Lister shook the foundation and revolutionized the practice of surgery. Lord Lister demonstrated to the world the part that living organisms play in the production of septic diseases, and then exhibited the simple means by which their growth and development could be prevented. He proved that wounds could be made to heal by first intention, that the process of suppuration could be controlled, and that precautions easy of application would stop the development of septic disorders.

RECENT ADVANCES IN SURGERY.

Notwithstanding the great progress of medicine during recent years, the results have been less manifest than the brilliant advances of modern surgery. There is no organ nor region of the body which has not been investigated by the surgeon; year by year the science has gained wider application, and reached a higher state of perfection by new methods of diagnosis and improvements in surgical technic. Only three and a half years ago the remarkable discovery of Professor Roentgen was communicated to the scientific world, and it has already proved of great value in surgical practice. It has revolutionized the old methods of military surgery, and rendered easy the location of metallic substances impacted in the body. It has given a fresh impulse to the study of diseases and deformities of the skeleton, and is an invaluable guide to the treatment of injuries and diseases of the epiphyses and joints. We can anticipate with confidence that the treatment of this large group of disorders will steadily improve.

The time is coming when there will be a considerable reduction in the number of adults suffering from hernial troubles, and this important result will be due to the latest improvements in radical operations. There will be a great reduction in the number of persons afflicted with loss of sight, the issue of the modern treatment of infantile ophthalmia and the corneal diseases of children, and also the early correction of errors of refraction.

HANS WILHELM MEYER.

During the last twenty-five years great advances have been made in aural surgery, and the number of deaf persons in this and other countries has been greatly lowered. The celebrated Danish physician, Dr. Hans Wilhelm Meyer, was the first to put his finger into the little space between the nose and the throat for the purpose of removing "pharyngeal vegetations." It took him some years to convince the profession that these outgrowths were a common cause not only of loss of hearing and obstructed nasal respiration, but also of defective articulation and impaired mental and bodily development. It is no exaggeration to assert that the number of young persons who have been saved from life-long deafness by the removal of these obstructing glands amounts already to hundreds of thousands, and that hundreds of thousands more will be delivered from this terrible affliction in future times. Dr. Meyer lived just long enough to know that the medical world recognize the great value of his discovery, and to-night we desire to honor his memory and to record our admiration of his splendid labors.

SEPTICEMIA.

The experimental investigation of the causation of human septic disease is still far from complete. Up to the present time the virus of septicemia has not been isolated, although the bodies of infected animals must contain a very powerful poison. The filtrates of streptococcus cultures have exhibited very little toxic action, and there is no very satisfactory evidence of their value in the complex disorders included in the term "blood poisoning." The prevention of inoculation through a wounded surface is now possible, but when the disorder is once fully established we are practically powerless to overcome the wide-spread disturbance. I have no doubt that some of the surgical victories of the future will be won by bacteriologic science. At the present time we have no cure for sepsis when it has entered the body; still we have much reason to hope that a remedy will be found, and that the destruction of sepsis-producing organisms within the blood and tissues may be at length accomplished.

CANCER.

The treatment of cancer and its manifold complications is another great field for inquiry in coming years. For some time a growing impression has prevailed that the disease has been steadily on the increase. Cancer causes about 6 or 7 per cent. of the total deaths of both sexes over 45 years, but these figures are probably rather under than over the real number. No doubt during the next few years the question of increase will be settled. Recently some investigations have been published suggesting that the disease is due to a parasite, and Mr. Plummer states that he has discovered parasitic bodies in 1130 cases out of 1278. Local irritation is certainly a great factor in the development of cancer, and this may possibly be the channel for the entrance of the parasite. Other observers have suggested that the disorder is liable to recur in particular places, and if this statement is corroborated by further investigation, it will certainly form a presumption in favor of cancer being an infective disease. A curative serum for carcinoma has not yet been discovered. Up to the present time surgical treatment yields the best results, and the earlier it is adopted the better. We look forward to the development of new methods of diagnosis, so that the surgeon may be able to recognize the seat and character of the disease in the incipient stage. The pathology and treatment of cancer still bristle with difficulties. We are anxiously waiting for more light and we are ready to receive it from whatever quarter it may fall upon us. It is at least some satisfaction to know that many of the best pathologists and surgeons are diligently laboring in all parts of the world to unfold the mysteries which still surround this terrible disease.

The address concludes with remarks on the future needs and progress of preventive medicine, the latter of which is to be fought in the dwellings of the working classes and the education of the public in needs of sanitary cleanliness.

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SATURDAY, AUGUST 5, 1899.

PRESENCE OF TYPHOID BACILLI IN URINE OF TYPHOID FEVER PATIENTS.

Attention has already been directed in this journal[1] to current studies on the presence of typhoid bacilli in the urine in typhoid fever. It has been shown that the bacilli may persist in the urine during and long after convalescence, and that the danger of infection from this source demands serious consideration. It is probably true that up to the present time this source of infection has been completely overlooked, and that the systematic disinfection of the urine in typhoid fever has never been carried out. The observations bearing on this phase of typhoid fever appear to be rapidly multiplying.

In the *Johns Hopkins Hospital Bulletin* for June, Gwyn summarizes the results obtained by the previous observers, as follows: In perhaps from 20 to 30 per cent. of all cases of typhoid fever, typhoid bacilli may be present in the urine at some time or other. When present, they are usually in pure culture, often numerous enough to render the urine turbid and to be recognizable on cover-slip examination. They generally make their appearance in the second and third week of the illness, and may persist for months and even years, in all probability multiplying in the bladder, the urine being apparently a suitable medium for their growth.

Often there may be symptoms of cystitis and also of renal changes, but the urine containing bacilli generally presents only the characteristics of febrile urine, and the presence of bacilli is of no prognostic significance, their disappearance or persistence without inducing local changes being the rule.

These conclusions differ somewhat from the opinion of Schichhold[2], who examined the urine in seventeen cases of severe typhoid with reference to the presence of typhoid bacilli. His conclusions are that the typhoid bacilli may be eliminated in the urine, but only when there are well-established lesions in the kidney substance, either due to typhoid bacilli or to complicating conditions. Typhoid bacilli appear in the urine shortly after the development of the renal lesions and without any reference to the appearance of rose spots, hence earlier when the renal changes develop abnormally early. Typhoid bacilli may be demonstrable in the urine during convalescence. The bacilli eliminated during the active disease appear to be strongly virulent, as shown especially by their behavior in the agglutination test.

Konjajeff also held that the typhoid bacteria indicated the presence of lymphoid nodules in the kidney, and Borges regards the renal changes as necessary to allow bacteria to pass through.

The work of Fütterer, showing the almost immediate appearance in the gall-bladder and the urine of organisms injected into the portal and jugular veins, taken in conjunction with the observation that many urines containing bacilli show no evidences of renal changes, may be regarded as indicating that typhoid bacilli in the urine owe their presence therein to a process of simple secretion from the blood. (Gwyn.)

The occurrence of several cases of cystitis in typhoid fever patients in the Johns Hopkins Hospital led to renewed attention to the urine. A number of cases were selected for examination for the presence of typhoid bacilli in the urine, hence these cases can not be used as data from which to figure percentages. In a series of seven unselected cases, positive results were obtained in three, i. e., in 42 per cent. In one case cystitis developed three months after an attack of typhoid fever, and typhoid bacilli were found present in abundance in the fresh urine. In one of the cases the number of bacilli present was estimated at five hundred million per cubic centimeter, so that a daily amount of 1000 c.c. of urine would contain five hundred thousand million organisms. In one of the cases studied and described by Petruschky, he estimated that 170,000,000 bacilli were present in 1 c.c. of the urine. These numbers indicate sufficiently well the grave danger of infection of water by such urines.

In most of the cases studied by Gwyn there was pyuria; albumin was twice present in large amount, usually only in traces. In the albuminous urines there were usually also found a few hyaline and granular casts; in one case the urine was otherwise perfectly normal. One case is remarkable because it presented a chronic cystitis of four years' duration, developing shortly after an attack of typhoid fever; pure cultures of typhoid bacilli were obtained from the urine in this case.

Neumann's observation that cloudy, freshly-drawn, acid urine in typhoid fever should be regarded as sus-

[1] See Journal, March 18 and June 17, 1899.

[2] Deutsche Arch. f. Klin. Med., 1899, Bd. lxiv, p. 506.

picious is confirmed by Gwyn's observations. In such cases the bacilli were detected in fresh specimens in all but one case. Since typhoid bacilli are present so frequently, and in such abundance in the urine, Gwyn very correctly emphasizes that all typhoid urine should be disinfected before being thrown out. Great care should also be exercised in handling and in the routine examination of urine in typhoid fever. Centrifugation of urine is usually possible, and in the absence of cultures, this should be carried out, and the detection by this means of bacilli in fresh urines in typhoid fever should suggest the proper antibacteriuric treatment and proper disinfection of the urine.

It will be recalled, as pointed out in the JOURNAL[3], that Richardson has shown that irrigation of the bladder with bichlorid of mercury solution and the internal administration of urotropin, a compound of ammonia and formaldehyde, appear to be safe methods of removing the bacilli. In his series of cases 30 to 60 grains of urotropin quickly removed all the bacilli.

OPEN-AIR TREATMENT OF PHTHISIS.

The sanitarium treatment for tuberculosis is becoming familiar to the profession, but is usually associated in one's mind with specially favoring conditions of climate, altitude, etc. The experience of one or two establishments in this country, that near Boston, for example, has to some extent corrected these impressions, but they still exist and further evidence that with ordinary climatic surroundings the open-air treatment can still be carried on, is of interest. The July number of the London (Eng.) *Practitioner* is chiefly devoted to this subject, the five original papers it contains being reports of the success of this method under what we would not call specially favoring natural conditions. Dr. R. W. Philip, who works in what the editor of the *Practitioner* calls "the most villainous climate in the kingdom," that of Edinburgh, gives a tabulated statement of the number of hours each of his patients spent in the open air during a particularly inclement period of the year, February, March and April. During the first two months there were only six days when there were over seven hours of sunshine, and less than a quarter of the time when there were only five, yet the patients were able to spend an average of at least five or six hours daily in the open air, or lie in bed at a wide open window, as was done in one or two instances. The results are certainly remarkable: improvement apparent within a week, increased appetite and better digestion, phenomenal gain in weight, disappearance of cough, lessened expectoration, cessation of night sweats, improved circulation, reduction of body temperature, are all reported. The testimony of Drs. Calwell (Belfast), Burton Fanning and Jane Walker (Norfolk), and Rowland Thurnam, all bear witness to the same facts of improvement, the latter giving a tabulated statement that makes consumption appear almost as a universally curable disorder, in every case of which a hopeful prognosis may be given. In only one of his twenty-four cases is there no improvement, in one the gain was in weight only, all the rest were actually or relatively cured or improved greatly.

We are not accustomed to think of the climate of the British Islands as a specially bracing one, or as particularly adapted to the treatment of tuberculosis, though its comparative mildness is an advantage. As regards dryness and sunshine, it is certainly far below this country in the scale. Our rather inclement winters in the northern states might seem unfavorable to outdoor treatment at that season of the year, but the experience of the Adirondack and Catskill sanatoria shows that they are not an insuperable objection even where the winters as a rule are unusually severe. In any case we have within our borders almost every possible climate, but these British experiences are encouraging as showing that even comparatively unfavorable surroundings are no sufficient bar to the care and cure of consumptives. In no part of our country can it be said that open-air treatment is climatically beyond the reach of the poor, provided the proper and perfectly practicable local sanatoria are established. While Colorado, California and other mountain and seaside resorts have their special advantages, they are by no means a *sine qua non* if cures can be brought about as in Thurnam's cases, by three or four months' open-air treatment in a reasonably healthy country district conveniently near the great centers of population, which are the breeding-grounds of phthisis. It is one of the most hopeful signs of the present interest in the subject that it is bringing out facts like these.

PSEUDORELIGION AND QUACKERY.

As we near the end of the nineteenth century, we congratulate ourselves on the remarkable advances that have been made in the various branches of the medical sciences and arts. We read of these advances in medical journals, in the metropolitan newspapers and in the magazines. Diseases and various afflictions which a quarter of a century ago were called incurable are now amenable to treatment. Not only this, but what is still more desirable and satisfactory is that the better understanding of the cause—the etiology—of many diseases has made these absolutely preventable. In one particular branch of medicine is the duplex advantage of today over the past specially noticeable. The pangs of childbirth have been removed or lessened by the discovery of anesthetics, but what is of still more importance, the terrible death-rate has been eliminated. The complications and diseases heretofore incident to maternity have been brought within the category of not only the easily curable, but what is still better, the easily preventable diseases. "Childbed fever," the dread of the physician and the nightmare of terrors to the expectant mother, is now recognized as a "blood-poisoning," a preventable disease, and curable if taken before the system is saturated. These remarks are made to show one side of a picture; let us see the other.

[3] March 18, 1899.

Here in Chicago, a city which has excellent medical colleges with well-qualified teachers, a city which contains as scientific, as well educated, as conscientious, and as noble a body of medical men as any city on earth; a city which proudly refers to its schools, colleges, and universities; a city of free libraries in which are contained the best of the literature of the world; a city of art and culture—here in the great and enlightened metropolis of the central states of the "most enlightened nation on earth," was enacted during the past week, what would have been a disgrace to the most barbarous times. For three days a poor woman, deluded into beliefs that one would suppose to be excusable only in the superstitious natives of central Africa, suffered the pangs of childbirth, and at the end, torn and exhausted, was allowed to lie with wounds unrepaired, and slowly absorb the poison, to which she finally succumbed. She was treated by a woman, a follower of Dowie, a member of his "Zion." No physician was called in to help the poor woman, none of the aids which medical science has always ready were allowed to be used. Insetad, this "healer" prayed and prayed, and, after the agony of childbirth was over, the mother lacerated through neglect, was allowed to lie with her bodily needs uncared for, while, we presume, the "healer" prayed, prayed and prayed—for money.

It is not pleasant to think that we are living among those who can calmly allow people to die in this way. We dislike also to remember that the intelligent legislature of the great State of Illinois legalized such crimes during its session last winter. And we wish we did not know that such murders are being permitted in practically every state in this enlightened country of ours. For while this particular class of cases appeals to the sentiments of the populace more than others, and as it is known to be preventable, still this murder by neglect is going on all the time. Whether it be "Christian Science" or Dowieism, or any other form of pseudoreligious quackery, it is a disgrace to the community that permits it under the plea of religious liberty to trifle with human life or human suffering. Religion, however misguided, if sincere and honest is respectable, and tolerable while it keeps in its own proper sphere, but these mercenary and homicidal deluders are criminal and should be dealt with as such. Pure religion and undefiled is worthy of all respect.

DIAGNOSIS OF SMALLPOX.

The timeliness of this seemingly trite topic is suggested by the recent prevalence of the disease, with frequent mistakes in diagnosis, and also by the collection of the observations of physicians on the present epidemic. Only a few meager reports have appeared, but they contain much that is of very great general importance. Corlett has given us the best summary that has yet appeared. The mistakes that have occurred in the diagnosis of smallpox during the last two years have been due in part to the unfamiliarity of a large part of the profession with the lesions of the disease, but in greater part to a change in the type of the disease itself, consequent on the wide practice of vaccination. Most recent cases indeed are varioloid, and very few are typical smallpox as described in the books. Despite this, the modified form is every whit as dangerous to the public health, for at any time confluent and hemorrhagic cases may obtain their contagion from a very mild case. Mistakes have been made easy by the fact that so many cases have been sporadic and the physician had not the help of the known presence of infection to aid in the diagnosis. Vast numbers of cases have been called chickenpox, and from them, lacking isolation, extensive epidemics have arisen. In cases as now seen there may be but few of the characteristic lesions, and they may mature early, frequently in ten to fourteen days. Also there may be no destruction of the true skin as in the well-developed pock. But it will always be possible with thorough search to find a few of the typical indurated pustules that are simulated by practically no other condition. So in a suspected case, careful scrutiny of the whole body-surface is demanded. It is characteristic that these indurated bodies will not on pricking completely discharge their contents, and that, when by repeated pricks they are nearly discharged, they will be found to retain a firm base, raised somewhat above the level of the surrounding skin. Along with an eruption some of whose components will exhibit these characters, there will be the abdominal pain and vomiting, the sudden onset, the chills, the headache and backache, the fever and delirium, the sweating and subsidence of fever on the appearance of the eruption, the furred tongue and fetid breath, and the early erythema or petechial eruption about the abdomen, buttocks and thighs. At times the history and a possible source of contagion will lend assistance. As the chief confusion has been in mistaking smallpox for varicella, the physician should remember that many keen observers of long and wide experience have never seen a case of chickenpox in the adult. It might be a safe rule in some respects, to call every case in an adult smallpox that one feels tempted to diagnose as varicella. Then in varicella the lesions are superficial and never indurated. They can readily be emptied by a single prick, each one lasts but a day or two, and they leave an excoriated skin-surface beneath, instead of a deeply attached crust. When there arises a question as between smallpox and scarlet fever, it is easy to remember that in the former the premonitory signs are more severe, that in the latter the erythema appears first on the chest and neck, and not on the abdomen and thighs as in smallpox. Measles has the early nasal and bronchial catarrh, with profuse lachrymation and injection of the conjunctivæ, and not the lumbar pain and other characters of smallpox. The eruption of measles is not raised or hard, and the temperature does not fall at the appearance of the eruption as in smallpox. Those who will bear these few points in mind will find their course, always beset with difficulty, not quite so doubtful. Be-

cause it is a dangerous disease, and because of late years there have appeared among us, both by lack of vaccination and by lapse of time since vaccination, many susceptible persons, it is highly important to recognize the disease at the earliest possible moment.

VENTRICULAR BAND SPEECH IN HYSTERIC APHONIA.

In this issue (p. 345) we publish an abstract of the article by Dr. Middlemass Hunt, in the English *Jour. of Laryng. Rhin. and Otol.,* where he describes a case in which speech was made possible by hypertrophy of the ventricular bands in a case of hysteric paralysis of the vocal cords. The case is of interest, as he says, in the development of the temporary ventricular band speech which seemed to be Nature's effort to meet even hysteric paralysis. The text-books appear to have pretty generally overlooked the subject from this point of view.

INTERNATIONAL CONFERENCE ON SYPHILIS AND VENEREAL DISEASES.

This conference, which, as previously noted in the JOURNAL, is to be held in Brussels, September 4 to 8, will discuss the possibility of ridding society of syphilis and venereal disease. Next to consumption come these diseases in their direful effects on humanity, and as they are certainly preventable, it would seem about time that international action be taken in the premises. While radical and harsh measures may be necessary for a generation or two, there are certainly no insurmountable obstacles to prevent their total elimination. Invited to the Conference are not only physicians, but lawyers and all public functionaries who are interested in the question. We hope and expect to see good results from the Conference.

QUACKERY WINS A POINT IN IOWA.

A local judge in Knoxville, Iowa, has declared the provisions of the state code in reference to the licensing of physicians to be unconstitutional, thus throwing over the state to the irregulars and quacks. The decision was given in granting a writ of habeas corpus to a notorious "Indian" doctor who had been arrested for the illegal practice of medicine. The grounds of his decision are not stated in the newspaper dispatch, and one cannot therefore form any judgment as to their validity, but the judge apparently made up his mind without taking any undue length of time, as the argument was made on Wednesday and the case decided Friday. One is naturally inclined to suspect a sympathy with quacks in some judicial and executive decisions, and we shall watch for further details of the case. It is understood that appeal to the supreme court will be taken promptly, and it is to be hoped that that body will see things differently than does this local judge. In the meantime it will probably be claimed that the state is "wide open" for all sorts of unlicensed practitioners and the beauties of judge-made law be admired *ad lib.;* but it is not, for happily, one county judge does not make decisions for the whole state.

YELLOW FEVER.

The country was startled at the beginning of the week by the announcement that many cases of yellow fever existed at the National Soldiers' Home, near Hampton, Va., midway between Newport News and Old Point Comfort. Just how the disease got there is hard to understand. One report traces the cause to an old soldier recently from Santiago, who entered the home in the early part of July; several patients were ill and one died before the disease was recognized. As we write, the cases are all confined to that locality, and as rigorous precautions are being taken no spread of the disease is liable to occur. While it is not an agreeable contemplation, still the fact remains that with all the precautions taken, the dread disease has found a foothold in our country; and that too at a place where it was least to be expected; also, we might add, where it can do but little harm, for while the virulence of the disease seems to be severe, it is so far north that no serious spread, in the ordinary course of events, is likely to take place. At least it is much better that it should be as far north as it is, and especially at a place away from the highways of commerce, than at New Orleans, Charleston or other southern seaport towns.

MEDICAL LEGISLATION.

No less than 241 bills relating directly or indirectly to the medical profession and to questions of public health are enumerated in full as to their titles, in the *Post-Graduate,* as having been presented to the New York Legislature during its last session. Of these, forty-one became laws. Probably a proportional number were introduced in the other state legislatures and many—some good, others bad—have passed. In some cases executive vetoes have saved the people from bad laws, and we regret to have to believe that in a few others they have not been interposed in behalf of the public welfare, or have been exercised to its detriment. In these days of general public interest in medical and sanitary matters, and of dissemination of the little knowledge that is a dangerous thing, it is of the highest importance that the medical profession should keep watch on the measures thus introduced. The session of a legislature is considered by many business men as a time of special peril; it should be a matter of concern to us also as guardians of the public health. If every legislature could have among its committees one on state medicine, largely made up of physicians, to which all bills directly or indirectly involving medical questions could be committed, it would be a rational step in advance and save us from a vast amount of useless and harmful legislation. If as a profession we could combine and insure, as is certainly possible with our united influence, the election of a few intelligent and upright physicians —not mere seekers after public places—to each legislature it would be a boon to our country and to ourselves.

THE BRITISH MEDICAL ASSOCIATION.

The report of the Council to the British Medical Association shows that the number of members of the Association last year was 17,746; during the year 1128 new members were elected, 183 died, and 506 resigned, leaving a net gain of 439, or a total of 18,185. This membership covers the Colonial branches and is not limited to Great Britain. The revenue for the year ending Dec. 31, 1898, amounted to £42,924; the expendi-

ture including £500 written off for depreciation of plant, £549 for losses on subscription, amounted to a total of £38,188, leaving a surplus of £4736. The accumulated surplus, which is mostly invested in real estate, now amounts to £69,721. Of the *British Medical Journal* the report says:

The high position of the *Journal* among the medical periodicals of the world has been strengthened and extended, while its circulation has shown a satisfactory increase. It is read not only in every part of the United Kingdom, but in every colony and dependency, while it is recognized abroad as a chief exponent of medical opinion in this country.

The prosperity of the medical profession rests primarily on the ability of its members to keep themselves acquainted with the rapid progress of the science and art of medicine, and one of the chief services which the *Journal* renders to members is the publication of original papers, special articles, and an epitome of foreign medical literature, which together reflect the best opinions and the most recent observations in medicine and the ancillary sciences selected with special reference to their bearing on practice. Tropical diseases, which are of interest not only to those members who practice in India and in tropical and subtropical countries, but also, in these days of rapid travel and extending empire, to a large proportion of those who practice in the United Kingdom, which is the center of the world's traffic, have recently demanded increased attention. By the prominence given to these subjects the *Journal* has contributed in no small degree to bring about the establishment of schools of tropical medicine in England, an example which has been followed in Germany and will probably soon be followed in France.

FAMILY FORM OF CYSTINURIA.

The appearance of cystin in the urine has been attributed to disturbances in metabolism comparable with those that give rise to diabetes and gout. In support of this view, the appearance of the conditions in families and its hereditary transmission are cited as evidence. It has, however, been suggested that the condition arises in consequence of the activity of micro-organisms, as in some cases cadaverin and putrescin have been found in the urine in conjunction with cystin. Some recent observations by Cohn[1] rather lend support to the former than the latter view. This observer reports the case of a girl, 7½ years old, who had been operated on several years previous for tuberculosis of the right knee-joint. For a year increased frequency of micturition had been noticed, and pain in the region of the bladder was complained of. These symptoms had increased in severity within three months, and the mother had observed that the urine appeared turbid and emitted a disagreeable odor. Exploration with a sound disclosed the presence of a calculus in the bladder, which rectal examination indicated to be the size of a walnut. Suprapubic cystotomy was performed, and a friable and rough stone found and extracted. On chemical examination the calculus was found to consist of cystin, and subsequent examination of the urine from the patient showed that it also contained cystin. Investigation with regard to the presence of putrecin and cadaverin yielded entirely negative results. Further inquiry elicited the fact that of eleven other members of the family, of whom nine could be examined, cystinuria was found to exist in six, but in none other than that reported could a calculus be detected.

[1] Berlin Klin. Woch., June 5, 1899, p. 503.

PATHOGENIC SARCINA.

Loewenberg,[1] in a case of ozena, isolated a pathogenic sarcina. The nasal mucus in this case was composed exclusively of polynuclear leucocytes, and an enormous number of packets of sarcinæ. The cultures gave rise to pure growths of sarcinæ. The treatment instituted led to complete and definite healing at the same time as the organisms disappeared and the fetor faded away. Of the usual solid media the sarcinæ form a shining moist coat, sometimes whitish, at other times slightly yellowish; isolated colonies resemble small drops of rich milk. Gelatin is not liquefied; the older colonies on this medium are rather yellowish. On the ordinary potato media it grows very luxuriously and forms moist white growths. In liquid media it forms an abundant sediment, while the fluid remains clear. In the cover-slip preparations from the nasal mucus of the patient it appeared in the form of characteristic cubical packages, but in the successive generations on artificial media it soon loses this mode of grouping, finally assuming the form of groups and masses and short chains of cocci; as is well known the ordinary yellow and red sarcinæ act in the same way. In the liquid media, however, the sarcina in question rearranges itself in the characteristic grouping. Loewenberg finds that this sarcina does not correspond to any of the three principal varieties established by Steubenrath, namely the sarcina alba, variabilis, and canescens. The new sarcina distinguishes itself from the others especially by the fact that it is pathogenic. Stubenrath, in his study of the genus sarcina, concluded that no sarcina had been described as pathogenic to either man or animals. Injected in the dose of 2 c.c. of a suspension in sterilized bouillon, into the peritoneal cavity of rabbits and guinea-pigs, Loewenberg's sarcina produced death in twenty-four hours; there was an intense peritonitis. White rats, injected under the skin, died from septicemia in twenty-four hours, cultures from the blood giving rise to pure growths. Loewenberg is inclined to attribute the ozena to the action of this sarcina. The nasal secretion from the nose from which it was isolated was alkaline instead of neutral, as is the case ordinarily. Not having observed the patient when he was well, it cannot be said whether this alkalinity was the result of the presence of the sarcina or not. The fetor undoubtedly depended on the presence of the sarcina, as shown by the fact that when the sarcina disappeared the fetor subsided. The cultures of the sarcina, however, did not possess any appreciable odor.

[1] Annales de l'Institut Pasteur, 1899.

MEDICAL BIBLIOGRAPHY.

The discontinuance of the publication of the *Index Medicus* is undoubtedly a medical misfortune. How serious a misfortune it may be time will tell, but we already have our comforters. In the *Semaine Medicale* of June 28, we find a lengthy editorial review of the medical bibliography at the end of the nineteenth centu-

ry, in which, after noticing the discontinuance of the *Index Medicus* and referring to the *Centralblatts* and year-books that in a way make up for its absence, it goes on to point out its own work in the line of international bibliography. It says, "actually after the disappearance of the *Index Medicus* from the field, the *International Bibliographical Bulletin of the Semaine Medicale* is the only general bibliographic review, all the other lists of new publications embracing only a special branch of medical science in a single country and language, even when qualified by the term international. Recently some periodic international bibliographies have appeared abroad, but these are monthly or quarterly publications, and as they are in their beginnings one cannot say that they will long survive. Considered as a retrospective bibliography with its general index constantly appearing, the bibliographic *Bulletin of the Semaine Medicale* will have a greater practical value than all the other bibliographies of the same period, including the *Index Medicus,* and even the 'Index Catalogue,' in that it gives a complete list of the works of each author under his name, whether published separately as books or monographs or in journals, while the subjects are noted with the greatest precision and detail in their alphabetic order." Each thinks his own the best, and we confess to being unconvinced of the superiority of the *Semaine Medicale's* bibliography. It is true that the "Index Catalogue," which we have still with us, is not absolutely complete, and that it publishes under the authors' names only the separate reprints or works that may be in the surgeon-general's library, but its subject catalogue is by far the fullest of anything that has yet been sent out. This may be readily seen by a comparison with the bibliography of acromegaly, given as a sample of the French journal, and that in the new series of the "Index Catalogue." The bibliography of gastrostomy has not been reached in the new series of the "Index Catalogue," but the incompleteness of that of the *Semaine Medicale* is shown by the lack of mention of a number of important papers and methods such as those of Kader and of Senn. In fact, its bibliography is very incomplete in some directions; in examining, for example, several issues taken at random, we find very little mention of English and American literature, especially the latter, which we cannot honestly admit, altogether aside from national prejudices, is so undeserving of notice, as would thus appear. The *Semaine Medicale* does not appear to be conscious of these omissions and we, therefore, take this opportunity to call its attention to their occurrence. As a bibliography of the more important articles by French authors, the list will probably take first rank. German authorities are also not neglected. For thoroughness and completeness, however, it falls far short of equaling either the *Index Medicus* or the "Index Catalogue." The continuance of the latter still keeps our country well ahead of all others in this matter of medical bibliography.

PROFESSOR BACCELLI is winning almost as much renown as from his scientific achievements, by the excavations in the Roman Forum which are being carried on under his inspiration and direction as Minister of Public Instruction.

Medical News.

PROF. F. MUELLER of Marburg has received a call to Basle, as Immerman's successor.

DEDICATION of the Houston Memorial Hospital, Coatesville, Pa., took place July 13.

DR. F. W. PARHAM, New Orleans, has been elected a member of the American Surgical Society.

DR. NORVAL H. PIERCE, Chicago, sailed from New York, July 26, to attend the International Congress of Otologists, in London.

MICHAEL FOSTER of London will deliver the next course of Lane Medical Lectures at Cooper Medical College, San Francisco, in 1900.

ERNEST LAPLACE, Philadelphia, has gone to England, to demonstrate by invitation a new instrument before the British Medical Association.

JULY 25 the attention of the medical authorities was called to the occurrence of eight cases of typhoid fever among the new recruits for the army at Camp Meade, Pa.

THE NEW buildings of the College of Physicians and Surgeons, Baltimore, are rapidly nearing completion and will be ready for occupation by the beginning of the session.

PROF. KARL EWALD, editor of the *Berliner Klinische Wochenschrift,* recently celebrated the twenty-fifth anniversary of his connection with the university as privat docent.

THE CENTENNIAL of the birth of Vincenz Priesznitz is to be celebrated at Dresden in August by an international exposition of appliances for hygiene and the care of the sick.

SINCE THE treatment of tetanus by injection of carbolic acid has been mentioned by the press, it has been learned that in Philadelphia at least two cases have been so treated, but as yet definite results can not be reported.

THE FIRST examinations under the new practice act of Illinois were held in Chicago Aug. 1 to 4. Thirty-four appeared for examination; five physicians, fifteen midwives and fourteen osteopaths.

PROFESSOR CERVELLO of Palermo now has a model sanatorium, constructed for him by a wealthy Italian, with accommodations for 150 patients, to test on a large scale his "igazolo" formic aldehyd treatment, described in the JOURNAL, June 24, p. 1438.

HENRY T. LEA of Philadelphia has given an additional donation of $8000 to the Pennsylvania Hospital for Epileptics, at Oakburne, for the erection of an industrial building. A previous donation of $50,000 had been given this institution by Mr. Lea.

ONE OF the unpleasant incidents of the recent strike of the employes of the Metropolitan Street Railway Company, New York, was an assault on a reputable physician who was performing his professional duty in dressing the wounds of an injured non-union conductor, on the street.

IT HAS always been claimed that leprosy did not exist in eastern Siberia, except among the natives, but recent advices to the *Semaine Medicale* announce that the wife of an official, a private soldier and six other persons have become affected with the disease since their arrival in the country.

AS A RESULT of the recent examination of candidates

for license to practice medicine in Pennsylvania, the State Board of Examiners has granted certificates to 375 out of a total of 425 who presented themselves. This was the largest number ever before the Board at one meeting.

REPORTS of deaths from tetanus are still coming in. While nearly all cases thus far reported are the result of injury received on or about the Fourth of July, there are a number the cause of which are aside from the annual fireworks. One such is recorded this week in Chicago, the original cause being a simple flesh wound.

DRS. S. R. OLLIPHANT, J. J. Archinard and Hermann B. Gessner are members of the faculty of the recently organized New Orleans College of Dentistry, filling respectively the chairs of chemistry, materia medica and hygiene, physiology, pathology, microscopic anatomy and bacteriology, anatomy and surgery.

DR. ALONZO GARCELON, President of the Board of Trustees of the AMERICAN MEDICAL ASSOCIATION, has been ill, and confined to his bed for the past three weeks. Dr. Garcelon is one of the oldest, and, at the same time, one of the most enthusiastic members of the ASSOCIATION, and his many friends we are sure are hoping for his early recovery.

THE QUESTION of removal of the Municipal Hospital of Philadelphia to new quarters still remains quite unsettled. Considerable inconvenience is caused by lack of room, and should an epidemic of smallpox or any disease of an infectious nature occur, it is hardly possible that all patients could be cared for in the hospital as it is at present arranged.

IN PHILADELPHIA the sum of $465.50 has been contributed during the week ending July 21, toward defraying the expenses incurred by the Children's Week Association. The object of this association is to give an opportunity for children to enjoy a few days' recreation away from the crowded tenement districts of the city, thereby lessening the infantile mortality.

TO DR. C. ALEXANDER of Breslau has been awarded the prize of $60 for the best work suitable for distribution in pamphlet form for the enlightenment of the public in respect to quacks, faith-healers, etc. The committee, which includes Professors Eulenburg and Guttstadt of Berlin, states that fifteen works were received in competition, all very good. Two others were awarded a smaller prize.

AN EPIDEMIC of anthrax is now prevailing to a moderate extent in Bedford Co., Pa. Up to July 25, six deaths had occurred among horses, and two men were seriously ill with the disease. State Veterinarian Leonard Pearson is making a thorough investigation. The epidemic is thought to be due to cattle contracting the disease by drinking water from a tannery in which infected hides had been used last year.

A NEW research scholarship has been founded by the British Medical Association, of the annual value of £200 —$1000—to be known as the Ernest Hart Memorial Scholarship, in memory of the late editor of the *British Medical Journal*. The appointee must devote himself to the study of some subject connected with state medicine. Dr. John W. H. Eyre has been appointed the first scholar.

THE Rebecca Smith Playhouse for Children, recently built in East Fairmount Park, Philadelphia, at a cost of many thousands of dollars, and afterward presented to the city, was opened to the public on July 24. The building is of the colonial style of architecture, with spacious verandas extending entirely around the structure. On the first floor is the superintendent's office, dispensary and kitchen, on the second floor a dormitory, playroom, sitting-room, bath-room, etc.

THE SEQUEL of the Bianchini case—the pardoning of the wife through the petitions and efforts of the husband —is as extraordinary as the case itself, in which the wife was condemned to five years' solitary confinement on clinical, with absolutely no chemical, evidence that she had been trying to poison her husband with atropin. (JOURNAL, xxxii, p. 900.) Bianchini is a well-known Paris artist.

MR. MARCEL BAUDOUIN entertained the French Medical Press Association after its trimestrial banquet in Paris, July 7, with an exhibition of original photographic views taken by himself during his tour of this country. They included scenes along the Northern and Union Pacific railroads, and their connections between New York and San Francisco, and in the Yellowstone National Park.

IN SEVERAL of the principal cities of Cuba there have been asylums for lepers who resorted to them voluntarily, but no strict isolation; during certain hours of the day the inmates were free to go in and out as they pleased. The sanitary authorities of Havana have now forbidden the lepers to leave the asylum and have decreed that all persons affected with the disease, rich or poor, must henceforth reside in them.

THE SEMICENTENNIAL of the Netherlands Association for the Progress of Medicine is being celebrated with a retrospective exposition which has collected many curious medical and surgical relics of former ages and shows the great progress accomplished, especially in the treatment of the insane. Among them are the wooden clappers which lepers were compelled to carry to give warning of their approach, and their peculiar black hats with white ribbons.

THE WORK of our American sanitarians in Cuba is already bearing fruit far beyond its borders. The last issue of the *Gaceta Medica da Bahia* republishes some ringing lay editorials which assert that the sanifying of Rio Janeiro and other South American ports may possibly prove one of the most remarkable and direct results of the Spanish-American War and "North American jingoism."

ENTERED on the records of the Medical Institute of Bavaria, according to *Echo Med.*, July 16, is a resolution, voted and presented to the authorities in 1836, protesting against the introduction of railroads into the country: "the rapid movement of the train cannot fail to produce serious mental disturbances in the brain, of the nature of delirium tremens." "Persons gazing at a rapidly moving train are also liable to be similarly affected and the track should be concealed by a five-foot fence its entire length."

OSCAR F. LACKEY, the first yellow fever patient in this country to be treated with antitoxin serum, was discharged, cured, from the New York Quarantine Hospital, July 24. In commenting on the case, Dr. A. H. Doty, health officer of the port, is credited with saying that the case was well marked and of the pronounced type. With his consent the serum was used subcutaneously, the first injection of 25 c.c. being given about five hours after the patient arrived at the hospital, July 6. Three hours later he received the second injection of 25 c.c., and four hours later a final injection of 50 c.c. No other treatment was given. The case was kept under close observation day and night and every detail carefully noted.

A PHYSICIAN of Sparrow's Point, a suburb of Baltimore, is being tried on a charge made by the State Board of Health for failure to notify the authorities of the existence of a case of smallpox. As this is the first prosecution of the kind outside of that city, the result is regarded with much interest to medical circles.

THE BACTERIOLOGIC department of Baltimore, under Dr. Royal Stokes, is saving the city thousands of dollars in the way of prophylaxis of communicable diseases. Examinations are made free of charge for all physicians, and reports sent to the sender of the specimens. In connection with the work an examiner of throats has been appointed to make examinations whenever deemed expedient in the case of school children.

THE GOVERNMENT of Colombia has officially requested the presence and advice of the Swedish leprologist, A. Hansen, in its struggle against the high tide of leprosy that threatens to overwhelm the land. He has not decided yet whether to undertake the task or not. The conditions are by no means so favorable as in Norway, where the number of lepers is comparatively small and the government is pecuniarily equipped. It is very different in Colombia, with its bankrupt and unsettled government and 1 per cent. of its entire population of three and one-fourth millions already affected. The scheme for establishing a great leprosorium on the island of Coiba was found impracticable. A communication to the last *Derm. Cbl.* states that the disease has spread to a frightful extent among the wealthier white families.

A PUBLIC subscription has been opened in France for the benefit of the laboratories for research in infectious and contagious diseases. The state allows them $25,000 a year, which is divided among the thirty-three institutions of the kind, and the committee in charge has issued a strong appeal for liberal contributions, stating that any disaster causing loss of life meets with a generous response from the public, while the fact that 657 persons die every day from preventable diseases is regarded with apathy. An instance is a recent explosion in which fifty-three lives were lost and $60,000 was promptly contributed by the people throughout the country to relieve the suffering, while no one thought of contributing a cent in the case of an epidemic of typhoid in a neighboring town at the same time, and which caused a hundred deaths. The amount received is already $15,000, the railroads heading the list with $8,000.

THE EXPERTS have established in the F. Maier case at Vienna, according to *Neue Freie Presse,* July 1, that transient mania from carbon dioxid intoxication was the cause of the murder, although there is only a single case of mania from inhalation of carbon dioxid on record, and none in which such a deed of violence occurred. The accused, a trusted and reliable employé of the railroad for thirty-five years, 58 years of age and happily married, had been advised to "take a sweat" for his influenza, and when he went to bed stuffed a rag into the stove-pipe to keep the room warm as the fire was nearly extinct. Aroused several hours later by an approaching train he rushed out of doors, and the fresh air in his condition must have produced mania, as he vaguely remembers going back into the house and calling his wife and sister to come out. When they failed to respond he became furiously enraged and, seizing a razor, attacked them in a frenzy. The sister in an adjoining room managed to escape, but the wife's throat was cut. Carbon dioxid intoxication was evident in the blood of the wife.

ACCORDING to a circular letter from Dr. J. N. McCormack, secretary of the Kentucky State Board of Health, the Board will hereafter refuse to recognize, as a basis for certificates to practice medicine, diplomas from any medical college which does not, in good faith, comply with the requirements of the Association of American Medical Colleges, the American Institute of Homeopathy and the American Eclectic Medical College Association, respectively, both as to preliminary education and four years' course of study. This means that no school that graduates three-year students will be recognized in that state hereafter. The Board provided an examination for three-year graduates of the present year, as many of the students had attended such schools in ignorance of its advanced requirements, but found this course unsatisfactory, a large percentage of the examinations indicating incomplete preliminary education as well as imperfect medical training.

REPORTS of August 2 indicate that the yellow fever situation at the National Soldiers' Home, near Hampton, Va., and commented on in our editorial pages, has improved, with, however, 4 suspicious cases on that date, while 2 cases were reported at Phoebus. The announcement of yellow fever at the Home was made on July 30, whn it was said that 30 well-developed cases existed, with 7 deaths on the 29th and 3 on the 30th. The authorities at once instituted a most rigid quarantine along the coast and about the Home, where there are about 4000 old soldiers from all parts of the Union. On July 31 there was but one death and one new case. On August 1 there were 4 deaths at the Home and 2 at Phoebus, with 6 new cases at the latter place and 1 at Hampton. The disease is supposed to have been brought to the Home by an old soldier who recently visited Santiago on leave of absence.

CRIMINAL FAITH-HEALING.—A recent attempt to practice obstetrics by means of "faith healing," by a Chicago desciple of Dowie, may possibly prove to be an eliminating factor of this masquerading sect in the State of Illinois. Mrs. Flanders, a member of the Dowie Tabernacle, invoked the aid of one Mrs. Bratz, to attend her in the capacity of a midwife, and after a prolonged labor of three days a child was finally born. When several days had elapsed it was observed that the prayers that had been so effectual in the delivery of the child were of an opposite character in the case of the mother, who was steadily becoming weaker. In spite of the prayers and entreaties of the patient and her "divine" assistant, a physician was summoned July 23. When he arrived he found the patient in the final stages of puerperal fever. She was in a semi-delirious condition; temperature was 105.2, with very rapid pulse, tympanites present; the perineum was lacerated, with a fetid discharge which permeated the entire room. The patient was immediately taken to St. Luke's Hospital, where, in spite of all efforts she died July 27. The coroner's inquest will be held August 8, and the State Board of Health will probably prosecute Mrs. Bratz for practicing midwifery without a license.

Menstruation by Ear.—Lermoyez has a patient who commenced to menstruate with the clear, non-coagulating blood issuing from the right ear each month, after the usual premonitory symptoms of the period. No lesion of the ear can be discovered; the tympanum is intact. After three years the menses occurred normally through the vagina, alternating with the ear, and gradually the normal menstruation has supplanted the aural. A slight degree of hypoesthesia of the tympanum and meatus and auditory anesthesia indicate auricular hysteria.—*Semaine Med.,* July 13.

Therapeutics.

Therapeutics of Camphor.

Herrgott, quoted in "Sajous' Annual," states that when used as an antigalactagogue it may be applied over the breasts in the form of an ointment or liniment of camphor, and the drug also should be given internally in doses of 1 or 2 grains (.065—.13 gm.) once, twice or thrice daily.

"In infectious diseases, the exanthemata, pleuro-pneumonia with meningeal symptoms, in infectious endocarditis, etc., more especially if the patient is in a condition of collapse, 15 to 45 minims (.72—2.26 gm.) of a 10 per cent. solution of camphorated oil affords prompt relief, employed subcutaneously. Even as much as 15 grains (1 gm.) of camphor daily, far from aggravating ameliorates cerebral symptoms. From 7 to 15 grains (.46 gm.) produces remarkable restorative effects."

"In influenza, pneumonia, typhoid, bronchopneumonia, etc., camphorated oil yields good results, but should be administered before the patient is too weak; it produces an increase of arterial pressure, free expectoration, and a feeling of physical well-being. If given by the mouth its taste may be disguised by essence of peppermint. It appears to be contraindicated where there is great cerebral excitement."—*Taussig.*

Camphorated oil produces the most remarkable effects in follicular angina, coryza, and acute pharyngo-laryngitis; in bronchitis it is a good expectorant; in fibrinous pneumonia it diminishes temperature and notably ameliorates the general condition. It is also serviceable in chloranemia and in phthisis during the period of softening with ulceration, night sweats, and hectic fever. In tuberculosis of the larynx the pains in the throat are notably diminished. Favorable action is likewise observed in hemoptysis."—*Alexander.*

"Camphor is to be recommended hypodermically in heart-failure, preferably employing camphorated oil. In a case in which the patient had a number of times been absolutely pulseless and apparently lifeless, its use was followed by the most gratifying results."—*West Philadelphia Polyclinic.*

For intestinal fluxes camphor is an efficient remedy. "It is essential to use the strong solution or essence (spirit) of camphor, of which 3 minims (.18 gm.) should be given on a cube of sugar or on a crumb of bread every few minutes. After one or two doses the diarrhea ceases, the pulse becomes stronger, color returns to the face, and the patient is on the high road to recovery. The tincture is almost equally useful in the initial rigor of acute specific diseases and in severe chill."—*Murrell.*

Local Treatment of Burns.

The local treatment is to be directed toward the limitation of the resulting inflammation, the prevention of septic infection, assisting the normal elimination of the eschar, the development of granulations, and limitation of the deformity. In burns of the first degree little or no treatment may be demanded. In the more aggravated cases of this type the application of home measures, such as bicarbonate of sodium, the white of egg and sweet oil (equal parts), lead water and laudanum, and the various hot or cold means generally at the disposal of the housewives will suffice.

Burns of the second and third degrees must be more strenuously treated. It is often a difficult problem to know which is the more soothing application to be advised and from which we may get the better result. In one case hot applications, in another cold; in some wet, and in others dry measures are to be employed. The vesicles, if numerous, should be untouched; but if only a few, they are best evacuated. The use of carbolized vaselin, 15 to 20 grains (1-2 gm.) to 1 ounce (31.1 gm.) watery solutions of carbolic acid, about 20 grains (1.3 gm.) to an ounce, (31.1 gm.), subnitrate of bismuth ½ to 1 dram (1.95—3.9 gm.) to an ounce (31.1 gm.) of ointment of zinc oxid or petrolatum, boric acid, either in watery saturated solutions or ointments of either zinc oxid or petrolatum in strengths varying from ½ to 2 drams (1.95—7.8 gm.) to 1 ounce (31.1 gm.) bicarbonate of soda in almost full strength, in ointment or watery solutions, and starch in varying proportions will usually be found very efficacious. Turpentin, where granulations are sluggish, will give excellent results, used either in full or diluted strengths, taking care not to produce too much stimulation. H. L. McInnis states that spirits of turpentin applied to a burn of either the first, second, or third degree almost at once relieves the pain, while the burn heals. After wrapping a thin layer of absorbent cotton over the burn the cotton is saturated with common turpentin and covered with bandages. Being volatile, the turpentin evaporates, and it is therefore necessary to keep the cotton moistened with it. When there are large vesicles, they are opened on the second or third day. It is best to keep the spirit off the healthy skin if possible, to avoid the local irritation.

Surgery of this day has placed many excellent antiseptics at our disposal, and there is no better application than bichlorid of mercury in the proportion of 1 grain (.065 gm.) or more, to 1000 parts of water and kept in constant contact, the dressings being made without removing the former cloths.

Acetanilid in full strengths of powder will be found effective, care always being given not to apply it over too great an area without watching its effect.

Ichthyol in watery solutions 1 (3.9 gm.) or more drams to the ounce (31.1 gm.), or in glycerin similar strength, or even in ointment form, with zinc oxid or petrolatum, about 1 to 3 iodin derivatives, such as iodol, aristol, europhen, applied iodin derivatives, such as iodol, aristol, europhenod, applied preferably in ointment, 15 to 30 grains (1-2 gm.) to the ounce (31.1 gm.) of petrolatum or lard are reliable measures.—*J. Abbott Cantrell in Sajous' Annual.*

The following prescriptions containing ichthyol are recommended by Leistikow for burns of the first and second degree:

BURNS OF THE FIRST DEGREE.

℞ Zinc oxid.....20 parts
Magnes. carb.....10 parts
Ichthyol .....1 to 3 parts

This powder, containing ichthyol, is the most satisfactory form in extensive burns of the first degree, and should be plentifully applied, being spread evenly over the surface.

BURNS OF THE SECOND DEGREE.

In extensive burns of the second degree a soft paste like the following is preferable:

℞ Carbonate of lime.....10 parts
Zinc oxid..... 5 parts
Oil .....10 parts
Lime water.....10 parts
Ichthyol ..... 1 to 3 parts

BURNS LIMITED TO RUBEFACTION OR VESICATION.

Nolda recommends the following:

℞ Europhen .....1 part
Vaselin
Lanolin, of each.....10 parts

This is applied three or four times a day to burns limited to rubefaction or vesication.

EXTENSIVE BURNS.

"The following may be used in the treatment of extensive burns:

℞ Aristol .....1 part
Sterilized olive oil.....2 parts
Vaselin .....8 parts

Around the edges of the burns, after the ointment is spread, the aristol in powdered form is dusted. In burns of small extent the powder form only is employed. Cleanliness must be thorough whenever the dressing is changed. One of its great advantages is its freedom from poisonous effects. There is some smarting at first, but it soon passes off."—*Walton.*

Pericarditis.

J. L. Lynch advises the following mixture in pericarditis:

R.	Tinct. verati viridis		
	Tinct. opii āā.....3i	3	90
	Sodii bicarb.....3ii	7	80
	Sacchari albi.....3iv	15	50
	Aquæ q. s. ad.....℥vi	186	60
M.	Sig. Tablespoonful every two or three hours.		

Thomas Stretch Dowse says the treatment must be in a degree palliative, and symptoms must receive special consideration and treatment as they arise. The rheumatic element may apparently demand the salicylates, but they must be given with caution. A mixture of

R.	Liquor ammon acetatis.....3i	3	90
	Spts. ether nit.....3ss.	1	95
	Tinct. digitalis .....m. v		30
	Aquæ, ad.....℥i	31	10

may be given every four hours. Should there be pain, 1 grain (.065 gm.) of the watery extract of opium may be given, with each dose of the mixture. Precordial distress is best relieved by the application of six or eight leeches. In the initial stage, with high fever and well-marked friction sounds, the writer believes in the administration of Dovers' powder gr. iiss (.16 gm.) with calomel gr. ⅛ (.008 gm.) every four hours. Precordial distress is sometimes relieved by camphor liniment and belladonna and spongio piline wrung out of hot water and sprinkled with a few drops of turpentin, which may be applied to the chest. If the dyspnea is urgent from great distension of the sac with fluid, potassium iodid may be given with bark (cinchona) in full doses, and diuretics may be tried, with saline purges. This failing, paracentesis may be performed. The fifth left intercostal space is usually selected. An incision is made through the skin one inch from the sternum, and a trocar and canula are then inserted. When pericarditis is secondary to ulcerative endocarditis or septicemia, brandy and quinin must be freely given.

PERICARDITIS WITH EFFUSION.

The following prescription is recommended by Kilgour for pericarditis with effusion:

R.	Infusi digitalis.....℥iv	124	40
	Potass. acetat.....3ii	7	80
	Spts ether nit.....3ii	7	80
	Aquæ cassiæ.....℥iss	46	60
M.	Sig. Tablespoonful every four hours.		

Deaths and Obituaries.

ROBERT HUNTER, M.D., New York University, 1846, died suddenly on his hunting preserves in Cæsarea, Ontario, July 29. He was born in Ayrshire, Scotland, seventy-six years ago, was educated in Edinburgh, and then came to New York, where he lived for twenty years.

L. A. CLARK, M.D., Rockford, Ill., died July 22, after a long illness. Dr. Clark was born in 1849, and during the early seventies served as surgeon on one of the Pacific steamers between California and China and Japan, and was at one time head of a smallpox hospital at San Francisco.

JOSEPH DODSON LOMAX, M.D., Troy, N. Y., a graduate of the College of Physicians and Surgeons, New York City, 1862, and superintendent of Marshall Infirmary, Troy, died July 22.

CHARLES J. MADDOX, M.D., Rockville, Md., died July 26 at the age of 80 years. The Doctor was a descendant of one of the earliest settlers of Maryland, and received his degree of A.B. from Georgetown University and of M.D. from the University of Maryland. His death was the result of a fall received in 1891.

J. N. Charbonnet, M.D., New Orleans, La., Tulane University of 1887, died July 23, at the age of 33 years....J. N. Hall, M.D., New Philadelphia, Ill., aged 85 years, July 28....Acting Ast. Surgeon John V. Hamilton died at Matanzas, Cuba, July 26....Henry Navigo, M.D., Georgetown, Pa., July 19, aged 50 years....W. W. Nelson, M.D., Tabery, N. Y., July 22, aged 36 years....H. V. Sooter, M.D., Ibernia, Mo., July 24....John F. Wolff, M.D., Philadelphia, July 24, aged 26 years....J. S. Tracy, M.D., formerly of Winona, Minn., died in Honolulu recently.

DEATHS ABROAD.

V. Mihalkovics, Budapesth, noted for his works on microscopic and embryonic anatomy....Professor Herpin, Tours....Professor Campos da Paz....T. B. M. Dack, M.D., Cleemore, Ont., a graduate of the Toronto School of Medicine, aged 35.

Miscellany.

Philadelphia Mortality Statistics.—During the week ending July 29, there were 481 deaths, this being a decrease of 29 over the previous week and an increase of 16 over the corresponding week of last year. Of the total number of deaths 112 occurred in children under the age of 5 years. The principal causes of death were: apoplexy, 5; nephritis, 39; cholera infantum, 78; cancer, 13; tuberculosis, 51; heart disease, 26.

Tuberculosis Among Cattle in Canada.—The *Union Medicale du Canada* asserts that comparatively few cattle in Canada are affected with tuberculosis. Only 8.5 per cent. reacted to tuberculin, out of 10,000 animals tested at the request of the owners, in 1898. Generalized tuberculosis was found in but 24 out of 33,000 slaughtered at Montreal in 1896. The severity of the quarantine for the European and United States markets has reduced the number of tuberculous animals offered for exportation, but this means that suspicious animals are retained for domestic use. The editorial urges the necessity of the detection of affected animals and their isolation, killing all with mammary or generalized infection, and keeping the rest for breeding and slaughtering, which would soon eradicate the disease without loss to the owners.

Symptoms and Morbid Anatomy of Yellow Fever.—The presence in the United States of an epidemic of yellow fever, and the yellow fever scare which occurs from time to time, should stimulate us to learn and to keep at our fingers' ends the more prominent and early symptoms of this disease. The morbid anatomy, too, is most essential as a diagnostic aid in settling disputes in doubtful cases. The bacteriologic findings, while still in doubt, may soon be cleared up, but for the present we will have to rely more or less on the classic symptoms and the results depicted on the post-mortem table. Some weeks ago Major and Brigade-Surgeon D. T. Laine made a collective investigation of yellow fever in the Island of Cuba. Thirty-five answers were received from physicians of note practicing in Havana, and two from Matanzas, relative to this question. In reply to the question: "What do you consider the most pathognomonic symptoms of yellow fever?" seventeen were of the opinion that pathognomonic symptoms do not exist, and eighteen do not rely alone on one symptom, but on all presented in a given case. It was the opinion of the majority that: "The *remission* from the first period, followed by the sudden elevation of temperature of the second period, in conjunction with *albuminuria*, *icterus*, and *hemorrhages* are the most typical symptoms" (*Med. News*, lxxv, No. 1). The symptoms not classed as characteristic were black vomit, bloody evacuations, headache, rachialgia, congestion of the conjunctivæ, and congestion of the face. These latter symptoms, it was believed, might also be present in other infectious fevers as well as yellow fever. It would appear, however, that with this opinion Guitéras does not entirely agree. A portion of the report is in accord with his belief relative to the diagnosis of yellow fever. In a pamphlet on yellow fever recently issued by the United States Marine-Hospital Service, Guitéras says:

"The diagnosis of individual cases of yellow fever is in my opinion very easy. There is no acute febrile disease in which there are so many signs that may be called pathognomonic. The diagnosis of the disease rests upon three such symptoms, namely: 'the *facies*, the *albuminuria*, and the want of *correlation between the pulse and the temperature*.' I rely mainly for my diagnosis upon the facies, which I consider extremely characteristic. However, as I consider it my duty to convince the local practitioners of the existence of the disease, I make it a rule not to announce officially the existence of yellow fever *until I have been able to show the presence of albumin in the urine* (Heller's contact method), which occurs on the second, third or fourth day." In an article in Keating's "Cyclopedia of Children's Diseases," Guitéras states that this albuminuria may only persist for a few hours during the day, but careful search will nearly always detect its presence. He concedes that albuminuria may also occur in other febrile diseases than yellow fever, but in none of them so constantly nor so *early* when in connection with such mild manifestations of the toxemia. In all such diseases the albuminuria will be found at the end of the first week, or during the second week. He lays considerable stress on the detection of jaundice early in the onset of the disease, speaking as follows (pamphlet on yellow fever, see above): "The physician to whom I am showing the signs of the disease usually expresses surprise when I state that jaundice is present. It is, of course, best noticed in the sclerotics. The icteric hue is better seen at some *distance* from the patient than when the eyes are closely inspected. The jaundice of the skin is best detected by taking up a fold of the skin between the fingers, when the contrast between the yellowish, anemic skin and the surrounding congested area will become well marked. The characteristic feature of the pulse is that while the temperature may be rising, the pulse will be falling. This frequently occurs on the third or fourth day, and the pulse in the evening may be ten beats slower than in the morning. In dengue the fall in the pulse-rate corresponds to the fall in the temperature."

Regarding the morbid anatomy Wasdin makes the assertion that the yellow fever cadaver has assuredly a most characteristic appearance, as follows: "All subjects dead of this disease bear a close resemblance to each other (*Med. News*, lxxiii, No. 10). The body is usually quite rigid, more or less intensely yellow, whites of eyes yellow, hypostasis in the dependent portions of the body comes on very early, the gums are bloody and the anterior nares caked with blood." In addition Guitéras states that the features of the cavader are somewhat bloated. In the abdominal cavity the most notable change from the normal is seen in the liver. It is at once recognized by its peculiar color, and Guitéras goes so far as to state that he has never seen it absent in an unsuspected case of yellow fever. It is thus described by the latter writer: "The organ is not enlarged. It is light in color, in which yellow predominates decidedly. The comparison to boxwood is a good one. In some cases the discoloration may appear in patches. Microscopically the evidences of fatty degeneration are present, as well as interstitial inflammation. The blood-vessels are empty. The liver cells are cloudy or decidedly fatty."

Wasdin describes the color of the liver as being from a light buff or boxwood to a dark brown. In some cases it has a nutmeg appearance. On section it has a pale yellow color and imparts to the knife a greasy stain. Both Guitéras and Wasdin lay stress on the contents and conditions of the stomach. Thus the former states that the organ is inflamed, the blood-vessels engorged with blood, and in some places extravasations may be found, and the organ may contain the dark, fluid "black vomit," even though ejected during life. Wasdin states that: "The most marked changes are found on the anterior surface and near the pylorus, the membrane here presenting a deep port wine stain from diffuse extravasation and often evidence of free hemorrhage. After the lapse of several hours the mucous membrane becomes softened and many erosions are found. The vessels of the duodenum are swollen, hemorrhagic, and contain dark blood, and the whole intestinal tract shows minute extravasations. The intestines have a glazed appearance and are sticky to the touch, and the peritoneal fluid has a darkish tint." Both writers state that the kidneys present the lesion of parenchymatous nephritis. There may be extravasations on the cortex, but the capsule shows no change from the normal. Its general appearance is "paleness," but incision shows congestion of the renal veins. At the bases of the pyramids of Malpighii, pale yellow fatty areas are seen. This latter change, according to Wasdin, is quite marked. The spleen is not altered in yellow fever; any deviation from the normal indicates some concurrent complication. This latter observation is important in excluding malaria, in which the organ would be enlarged. According to Guitéras the two diseases have been found to coexist in the same patient, and have led to mistake in diagnosing yellow fever. The adrenals are normal. The contents of the thoracic cavity show no special change except that a yellow tint is prominent. Wasdin has noticed considerable congestion of the vasa vasorum at the base of the heart, forming a tracery over the serosa and on the walls of the auricles, and at times being ecchymotic.

London.

[From our Regular Correspondent, July 15.]

DREYFUS AND HIS PHYSICIAN.—There is one fact in the later revelations of the unspeakable Dreyfus case of which we as a profession have a right to be proud, and that is the statement of Captain Dreyfus, in his pathetically moderate description of the atrocities to which he was subjected, that he owes his life to a prison physician, whose name even he does not know, but whose emphatic protests compelled and frightened his brutal jailers to abandon their fiendish plan of treatment, which was intended to either kill or drive him insane. He it was who insisted on the removal of the leg-irons, and secured the alteration of the fence which was converting the wretched little hut into a veritable Black Hole of Calcutta. This took courage, for we must remember that the entire infamy was approved, if not actually devised by the Minister for the Colonies himself, and the doctor's name certainly ought to be learned at once and placed on the roll of honor with those of Picquart and Zola. A profession which can make a Frenchman behave like a man in the Dreyfus case has something remarkable about it.

PILLS BY THE BOTTLE.—A most singular cause of death was recorded yesterday at Bath, where a man died of perforation of the stomach, due to the presence of some twenty small bottles, tightly corked and sealed, and containing mercury. These together weighed over a pound, and had been swallowed by the deceased while in a state of dementia, under the impression that they were medicine—presumably pills of much potency.

DEATH OF THE CZAREVITCH.—A melancholy medical interest attaches to the death of the Czarevitch, previously noted in the JOURNAL, that he died of the same disease as did his father only five years before. The hereditary influence could only have been of the most indirect character, as the first symptoms of consumption appeared in both father and son within a few years of each other; indeed ,the son's condition was publicly admitted first, and it seemed at one time as if he were going to succumb before his father.

BLACKMAILER RIGHTEOUSLY TREATED.—There is some sense in an honest man going to law in England; in America, alas, the utmost that a doctor can hope to obtain from an appearance in court against a patient is to escape with his life—and the privilege of paying his own costs. But in England he can actually get justice on the blackmailer. Dr. Davidson, of Gosberton, has just had this pleasure, and deserves the hearty thanks of our entire profession for his high-minded pluck in "carrying the war into Africa." A couple of months ago he

received the usual note from a woman who had consulted him a day or two before. "*Sir*—Unless you do me some recompense for insulting me the way you did at your surgery I shall inform someone else about it. It ought to be well worth £10 to you for me to say nothing about it." This has a most familiar sound, but the sequel is a delightful novelty. Dr. Davidson not only rejected her demand but promptly prosecuted her as a blackmailer, and within a month she was found guilty and sentenced to twelve months' imprisonment with hard labor, and most wonderful of all, by a jury. Fancy twelve unterrified American citizens, of the noble and chivalrous type that usually get on our juries, passing such a sentence as this on a woman, and a poor woman at that, for anything she might have done or threatened to do to any "doctor feller." We have known physicians in the Middle West who actually dared not hold any property in the state in which they lived, except a homestead in the name of their wife, for dread of the malpractice and other blackmail suits with which they were threatened, and which would certainly be brought, in full reliance on a sympathetic jury, if any trace of attachable property could be found.

APPENDICITIS IN CLASSIC LITERATURE.—Appendicitis has been given a place in classic literature at last. In an interesting note in the *Guy's Hospital Gazette*, Sir Samuel Wilks quotes a paragraph, written by Addison—of "Addison Disease" fame—in 1836, giving a full and surprisingly accurate account of "a deep-seated abscess in the right iliac region—which arises in a large majority of cases from disease of the appendix ceci: this is often found detached in the midst of the abscess, with perforation at its extremity." He even alludes to the "grape-seed" theory, to condemn it, on the shrewd, if slightly mistaken ground that the real cause of the disease is the presence of oval fecal concretions, containing "much limy matter." Dr. Wilks also calls attention to a curious passage, referring to the cecum, in "Tristram Shandy." It occurs in the famous conversation on all sort of improper anatomic matters between Dr. Slop and Tristram's father, the night of his birth. "'Tell me, Doctor, where is the blind gut?' said my father. 'It lies between the ilion and the colon,' replied Dr. Slop. 'Is it the same in woman as in man?' 'The very same,' said Slop. 'That's more than I know,' quoth my father." The question and curiously skeptical rejoinder of Shandy, Sr., is oddly significant, in view of the far greater frequency of "typhlitis" in men than in women, and as Sterne himself was a practicing physician, one is almost tempted to suspect that some knowledge of this clinical fact had been gained by him, or was current in the profession, even at that early date.

COMPARATIVE RARITY OF APPENDICITIS IN ENGLAND.—Now that appendicitis has been given a respectable antiquity, perhaps the English practitioner will begin to recognize it officially. The difference between the frequency of appendicitis in England and in America is something astonishing. We have talked with intelligent English physicians in large practice, and they have assured us that they do not see three cases a year, and with consulting surgeons who operate almost as infrequently. We can hardly believe that all this discrepancy is due to the greater frequency of the disease on this side of the Atlantic, although a decided difference is proved to exist by the rarity with which appendicular mischief is found in the routine autopsies at the great hospitals. Our English brethren, with characteristic frankness and self-depreciation, explain it by the statement that appendicitis is the rage in America, and we diagnose it to please our patients. Others, even more benighted, ascribe it to the fact that we eat "such a beastly lot of fruit," a weak and reprehensible habit fit only for children and "furriners." The truth probably lies between us, too great an enthusiasm to be fully abreast of the pathologic procession, on our part, and too strong a tendency to keep a safe distance behind it, on theirs. Possibly the mixture of nationalities, and changed environment, in our new country, may make our atrophying appendicular "remnant" even more variable and unstable.

COMMENDABLE COURTESY.—The invitation of Clark University to Ramon y Cajal, to deliver a series of lectures on the structure of the brain, at its centenary celebration, is widely commented on in England as a gratifying proof of the absolute internationalism of science, and as a most graceful and commendable act of courtesy to a whilom foe.

ROYAL COLLEGE OF SURGEONS.—The annual meeting of the Royal College of Surgeons revealed that the Council had no intention of granting any rights whatever to Members. A new charter was asked for, simply adding the power to create Honorary Fellows, and the president plaintively begged the meeting not to cloud the glory of the coming centenary by raising "discordant issues." But as this was simply a graceful dodge to cajole the Members into remaining unrepresented until the next centenary, the meeting naturally objected, and a motion to return the proposed charter to the Council, with a statement that the powers asked for were inadequate, was carried by a large majority.

KEROSENE AND MOSQUITOES.—It is of interest in connection with the approaching expedition to Sierra Leone, to test the possibility of exterminating mosquitoes, to know that a test has just been made of the kerosene method. The water-tank of an Italian villa was found swarming with culex larvæ estimated at 400 or 500 to the bucketful. Ten drops of kerosene added to the bucketful killed them all in twenty minutes, and a few teaspoonfuls sufficed for the whole tank of 300 cubic feet capacity. At this proportion quite large ponds or even marshes may be coated at very slight expense.

SEATS FOR SHOPWOMEN.—The much-needed seats-for-shopwomen-bill has just passed the House of Lords by a large majority, this giving Lord Salisbury a well-deserved snub for his captious and unintelligent resistance to the measure. He again attacked it, but to no effect.

Queries and Minor Notes.

DOSAGE OF CURARE.

ANTIGO, WIS., July 26, 1899.

To the Editor:—The enclosed was taken from the JOURNAL, and as I have a case of epilepsy I would like to try curare, but it seems to me the dose is altogether too large. Is the prescription correct? Kindly let me know through next week's JOURNAL, and oblige

Yours respectfully, M. J. D.

ANSWER.—The clipping enclosed is taken from the JOURNAL, Jan. 7, 1899, p. 29, and is an abstract from the *Jour. de Med. de Paris*, Dec. 11, 1898. The dose as given is unquestionably too large. The dose of curare is from 1-20 to ½ grain (0.003—0.03 gm.), while that of the alkaloid curarin is as small as 1-200 or 1-100 grain (0.0003—0.0006 gm.) hypodermically.

The Public Service.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., to and including July 27, 1899:

F. M. Barney, acting asst.-surgeon, leave of absence granted.

Henry H. Bradley, acting asst.-surgeon, to temporary duty in the camp hospital at Camp Meade, Pa.; later orders require him to proceed to San Francisco, Cal., for duty in the department of California.

Robert Burns, acting asst.-surgeon, from Plymouth, N. H., to Fort Ethan Allen, Vt., to accompany the 3d Cavalry to Manila.

John R. Clark, acting asst.-surgeon, from Fort Wadsworth, N. Y., to San Francisco, Cal., for duty in the department of California.

A. P. D. Cleary, acting asst.-surgeon, from Fort Screven, Tybee Island, Ga., to Atlanta, Ga., as attendant surgeon and examiner of recruits.

Charles F. Craig, acting asst.-surgeon, orders directing him to proceed from the Josiah Simpson Hospital, Fort Monroe, Va., to San Francisco, Cal., are revoked and he will proceed to Havana, Cuba, for duty at Camp Columbia, Cuba.

Gerry S. Driver, acting asst.-surgeon, from Porto Rico to Fort Myer, Va., to accompany the 3d Cav. to Manila, P. I.

Douglas F. Duval, lieutenant and asst.-surgeon, U. S. A., from West Point, N. Y., to San Francisco, Cal., for duty in the Department of California.

Charles B. Ewing, captain and asst.-surgeon, U. S. A., from Fort Brady, Mich., to San Francisco, Cal., to report for duty with the 3d Cav.; these orders so amended as to direct him to join the said regiment at Seattle, Wash., on or before August 10.

Hyman Finkelstone, acting asst.-surgeon, from New York City to Fort Ethan Allen, Vt., to accompany the 3d Cav. to Manila, P. I.

John N. Goltra, acting asst.-surgeon, from Fort Niagara, N. Y., to Fort Brady, Mich.

John C. Greenewalt, lieutenant and asst.-surgeon 33d Inf. Vols., from Chambersburg, Pa., to Fort Sam Houston, Texas.

William R. Hall, major and surgeon, U. S. A., from duty as attending surgeon, Washington, D. C., to New York City, August 15, 1899, for duty in the Department of the East; on the completion of this duty he will sail as a passenger on the hospital ship *Missouri* for duty in the Philippine Islands.

Charles L. Heizmann, major and surgeon, U. S. A., assigned as chief surgeon, Department of Texas.

John R. Hicks, acting asst.-surgeon, from Fort Crook, Neb., to Fort Screven, Tybee Island, Ga.

William Reclin Kirk, acting asst.-surgeon, leave of absence granted.

William F. Lippitt, Jr., captain and asst.-surgeon of the U. S. A., assigned temporarily as commanding officer of the general hospital at Washington Barracks, D. C.

Theodore J. Lyster, acting asst.-surgeon, from Ann Arbor, Mich., to Havana, Cuba, for duty in the Division of Cuba.

J. G. Marron, acting asst.-surgeon from Brainard, Neb., to San Francisco, Cal., for duty in the Department of California.

Louis M. Maus, major and surgeon, U. S. A., temporarily a member of a retiring board convened at Governor's Island, N. Y.

Willson Murray, acting asst.-surgeon, from Platte City, Mo., to Fort Myers, Va., to accompany the 3d Cav. to Manila.

George J. Newgarden, captain and asst.-surgeon, U. S. A., sick leave extended.

Jefferson D. Poindexter, captain and asst.-surgeon, U. S. A., relieved from further duty and station at Columbus Barracks, Ohio.

Ogden Rafferty, major and surgeon 27th Inf. Vols., relieved from further duty and station at Camp Meade, Pa.

Henry D. Snyder, captain and asst.-surgeon, U. S. A., member of a board of survey on subsistence stores at Savannah, Ga.

James B. Stockard, acting asst.-surgeon, from Burlington, N. C., to San Francisco, Cal., for duty in the Department of California.

Thomas C. Stunkard, acting asst.-surgeon, from Terre Haute, Ind., to San Francisco, Cal., for duty in the Department of California.

Frank L. R. Tetamore, acting asst.-surgeon, from Buffalo, N. Y., to San Francisco, Cal., for duty in the Department of California.

William H. Tukey, acting asst.-surgeon, from Malden, Mass., to San Francisco, Cal., for duty in the Department of California.

Wilfrid Turnbull, major and surgeon, Vols., leave of absence extended.

Charles Wilcox, captain and asst.-surgeon, U. S. A., leave of absence extended.

Charles E. Woodruff, captain and asst.-surgeon, U. S. A., from Benicia Barracks, Cal., to Manila, by the first available transport.

Movements of Navy Medical Officers.—Changes in the medical corps of the U. S. Navy for the week ending July 29, 1899:

Surgeon L. W. Atlee, detached from the *Bennington* and ordered home via *Solace*.

P. A. Surgeon G. Rothganger, detached from the *Marietta* and ordered home and to wait orders.

P. A. Surgeon M. K. Johnson, detached from the naval hospital, New York and ordered to the *Marietta*.

Asst.-Surgeon W. M. Wheeler, when discharged from further treatment at hospital, Yokohoma, Japan, ordered home in the United States and to wait orders.

Asst.-Surgeon T. M. Lippitt, detached from the *Solace* and ordered to the *Baltimore*.

Asst.-Surgeon R. W. Plummer, ordered to the naval hospital, New York.

Surgeon J. W. Ross, retired, granted leave for one year abroad.

Asst.-Surgeon H. A. Dunn, detached from the *Panther* and ordered to the Washington Navy Yard.

P. A. Surgeon L. L. Von Wedekind, detached from the hospital, Cavite, P. I., and ordered to Mare Island, Cal.

Marine-Hospital Changes.—Official List of Changes of Station, and Duties of Commissioned and Non-Commissioned Officers of the U.S. Marine-Hospital Service, for the seven days ended July 27, 1899.

Surgeon F. W. Mead, to proceed to New York City and assume temporary charge of the purveying Depot.

P. A. Surgeon H. D. Geddings, relieved temporarily from duty on the commission for the scientific investigation of yellow fever, and assigned to temporary duty in the Hygienic Laboratory. To proceed to Boston, Mass., for special temporary duty.

P. A. Surgeon J. C. Perry, detailed for duty in the office of the U. S. Consul at Hongkong, China.

P. A. Surgeon C. H. Gardner, to assume temporary charge of the Port Townsend Quarantine.

P. A. Surgeon E. K. Sprague, granted leave of absence for 27 days from August 7, 1899.

P. A. Surgeon H. W. Wickes, granted leave of absence for 30 days from August 6, 1899.

Asst.-Surgeon S. R. Tabb, upon being relieved from duty at Baltimore, Md., to proceed to Savannah, Ga., and assume command of the service.

Asst.-Surgeon M. H. Foster, upon being relieved from duty at Savannah, Ga., to proceed to the Port Townsend Quarantine station, and report to the commanding officer for duty.

Asst.-Surgeon L. L. Lumsden, to proceed to Port Townsend, Wash., and assume temporary charge of the service.

Asst.-Surgeon W. C. Billings, relieved from duty at the Immigration Depot and directed to report to the commanding officer at New York City for duty and assignment to quarters.

Asst.-Surgeon Carroll Fox, to report to commanding officer, Baltimore, Md., for duty and assignment to quarters.

Asst.-Surgeon T. B. McClintic, to report to commanding officer, Cape Charles Quarantine, for duty and assignment to quarters.

Asst.-Surgeon D. H. Currie, to report to commanding officer at Louisville, Ky., for duty and assignment to quarters.

Asst.-Surgeon Joseph Goldberger, to report to Surgeon L. L. Williams, Immigration Depot, New York City, for duty.

Asst.-Surgeon Wm. A. Korn, to report to commanding officer, Chicago, Ill., for duty and assignment to quarters.

Asst.-Surgeon J. M. Holt, to report to commanding officer, St. Louis, Mo., for duty and assignment to quarters.

Asst.-Surgeon F. E. Trotter, to report to Surgeon L. L. Williams, Immigration Depot, New York City, for duty.

Asst.-Surgeon C. W. Vogel, to report to commanding officer, Boston, Mass., for temporary duty and assignment to quarters.

Acting Asst.-Surgeon Jay Tuttle, granted leave of absence for 7 days.

PROMOTIONS.

Hospital Steward Henry Gahn to be hospital steward and chemist.

Hospital Steward W. L. Stearns to be hospital steward and assistant chemist.

APPOINTMENTS.

Carroll Fox of Pennsylvania, commissioned as assistant-surgeon.
Thomas B. McClintic of New York, commissioned as assistant-surgeon.
Donald H. Currie of Missouri, commissioned as assistant-surgeon.
Jos. Goldberger of Pennsylvania, commissioned as assistant-surgeon.
William A. Korn of New Jersey, commissioned as assistant-surgeon.
John M. Holt of New York, commissioned as assistant-surgeon.
Frederick E. Trotter of New York, commissioned as assistant-surgeon.
Charles W. Vogel of Maryland, commissioned as assistant-surgeon.

Health Reports.—The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon-General of the U. S. Marine-Hospital Service, during the week ended July 29, 1899:

SMALLPOX—UNITED STATES.

Florida: Jacksonville, July 8 to 22, 5 cases.
Kentucky: Louisville, July 13 to 20, 10 cases.
Louisiana: New Orleans, July 15 to 22, 1 case.
New York: New York, July 15 to 22, 3 cases.
Ohio: Cincinnati, July 22, 5 cases, 1 death; Cleveland, July 15 to 22, 2 cases; Dayton, July 15 to 22, 2.
Pennsylvania: Pittsburg, July 15 to 22, 1 case.
Virginia: Portsmouth, July 15 to 22, 1 case.
Washington: Spokane, July 18 to 22, 5 cases.

SMALLPOX—FOREIGN.

Belgium: Antwerp, July 1 to 8, 3 cases, 1 death.
Brazil: Sao Paulo, June 27, epidemic.
China: Hongkong, May 27 to June 3, 5 cases, 1 death.
Cuba: Santiago, July 1 to 8, 1 case.
Greece: Athens, July 1 to 8, 18 cases, 5 deaths.
India: Bombay, June 20 to 27, 14 deaths.
Mexico: Mexico, June 9 to 16, 10 cases, 5 deaths.
Russia: Moscow, June 17 to July 1, 27 cases, 11 deaths; Warsaw, June 24 to July 1, 3 deaths.
Straits Settlements: Singapore, June 10 to 17, 1 death.
Uruguay: Montevido, May 27 to June 3, 1 case.

YELLOW FEVER.

Brazil: Rio de Janeiro, June 9 to 16, 5 deaths.
Colombia: Panama, June 8 to 15, 10 cases, 4 deaths.
Cuba: Havana, July 6 to 13, 2 deaths; Manxanillo, June 27, 1 case in barracks; Santiago, June 27 to July 1, 68 cases, 13 deaths.
Mexico: Cordoba, June 27 to July 1, 17 cases, 9 deaths; Tampico, July 1 to 7, 1 case, 1 death; Vera Cruz, July 13 to 20, 17 deaths.

CHOLERA.

India: Calcutta, June 10 to 17, 6 deaths.
Japan: Asaka and Hiogo, June 10 to 17, 1 case, 1 death.

PLAGUE.

China: Hongkong, May 27 to June 3, 92 cases, 97 deaths.
Egypt: Alexandria, July 6, one or two new cases daily.
India: Bombay, June 20 to 27, 50 deaths; Calcutta, June 10 to 18, 9 deaths.
Straits Settlements: Penang, June 10 to 17, 11 cases, 8 deaths; Singapore, June 10 to 17, 1 death.

CHANGE OF ADDRESS.

Brown, G. M., from Davis Junction to 298 Maxwell St., Chicago.
Bryan, C. H., from 2642 Wentworth to 3030 Wabash Avenue, Chicago.
Brucker, C. M., from Canon City, Colo. to 1575 Yates St., Denver, Colo.
Clark, C. G., from Pittsfield, Mass. to 317 E. 89th St., New York City.
Church, C. G., from Marysville to Van Wert, Ohio.
Dannaker, C. A., from 120 Grand to 203 E. 12th St., Kansas City, Mo.
Dorian, J. S., from Buffalo to 6 C St., Niagara Falls, N. Y.
Gillespie, W. J. from Philadelphia to Ambler, Pa.
Hegele, H. W., from 201 Lincoln to 153 Robey St., Chicago.
Hamilton, G. W., from St. Mary and Elizabeth Hospt. to 615 W. Broadway, Louisville, Ky.
Jefferson, B. L., from Hayden to Steamboat Springs, Colo.
Lester, E. S., from Dominion to Kadesh, Va.
Miller, W. G., from New Castle, Pa. to Angel Island, San Francisco, Cal.
McBride, M. A., from Watt to Battle, Texas.
Price, E. M., from Rushville to Astoria, Ill.
Quillin, N., from Linton to Carp, Ind.
Raymond, J. H., from Brooklyn, N. Y. to Box 1285, Pittsfield, Mass.
Sherrill, E. A., from Cookes Point to Hix, Texas.
Scott, A. C., from 825 Willson Ave to Central Ave, Cor. Van Buren St., Cleveland, Ohio.
Van Duyn, A. C., from 3010 Prairie Ave to the Renfost, 52d and Cottage Grove Ave, Chicago.
Watkins, G., from Lead Hill to Carrollton, Ark.
Wallace, A. M., from 927 North Kansas Ave to 724 Kansas Ave, Topeka Kansas.